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"THROUGH THE EYE"
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THE CIVILIZATION OF THE
ANCIENT EGYPTIANS



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THE FIRST TWO VOLUMES

EVOLUTION. By J. A. S. WATSON, B.Sc.

THE CIVILIZATION OF THE ANCIENT EGYPTIANS

By A. BOTHWELL GOSSE.

Other Volumes in Preparation





[British Museum.

The Young Rameses.
Rameses II. 1300-1234 B.C.

THE CIVILIZATION OF THE ANCIENT EGYPTIANS

BY A. BOTHWELL GOSSE

AUTHOR OF "THE KNIGHTS TEMPLARS"

"THE MAGIC OF THE PYRAMIDS AND THE MYSTERY OF THE SPHINX"

ETC. ETC.

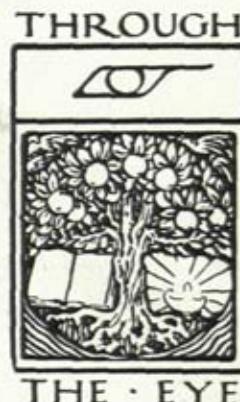


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"HISTORY no longer shall be a dull book, . . .
You shall make me feel what periods you have
lived."

EMERSON.

"THE Archaeologist has admittance to the magical
kingdom, to which is added the freedom of the
City of Remembrance."

BATTISCOMBE GUNN.

THE CIVILIZATION OF THE ANCIENT EGYPTIANS

CHAPTER I

THE EGYPTIANS, THEIR TEMPERAMENT AND DOMESTIC LIFE

"OH, Egypt, Egypt ! fables alone will be thy future history, wholly incredible to later generations, and nought but the letter of thy stone-engraved monuments will survive."

The later generations are realizing the value of these stone-engraved monuments. The fables, too, are found to be very suggestive ; indeed, frequently they embody the essence of the truth, whereas history recounts only the external.

A sympathetic understanding is the antidote to incredulity, and will infuse the spirit into the letter of the stone-engraved monuments.

The most striking characteristic of the civilizations of the world, especially of the West, is their evanescent nature. A State, to some extent primitive, comes to the front, evolves rapidly, reaches its zenith and then declines. A few hundred years covers the whole process. Carthage, Greece and Rome "have their day and cease to be." There is no stability, no permanence. On the contrary, however, the most notable quality of the Egyptian civilization is its permanent character. Instead of lasting only a few hundred years, it endures for thousands ; and whereas in other countries the entire evolution of the civilization can be traced from its primitive beginnings, through infancy, maturity, old age and death, in Egypt there appears to be no beginning, the civilization apparently starts mature ; and although within it

The Civilization of the Ancient Egyptians

there are minor cycles of decline and renaissance, still the initial starting-point has not been found ; it ever recedes down "the arches of the years" into the night of time.

But however distant, there must have been a starting-point, and the problem requiring solution resolves itself into two alternatives. Did this magnificent civilization evolve in Egypt from primitive beginnings, or was it transplanted in an infinitely remote epoch from some other land ?

An answer is provided by the tradition of the race, stating that the Divine Kings, who ruled over their ancestors in the Nile Valley tens of thousands of years ago, taught them all the arts and sciences.

This answer presents two more questions. Who were the Egyptians, and were these Divine Kings of the same or of another race ?

Careful study of the subject from all points of view leads to the conclusion that there were two predynastic races : one small and allied to the negro ; the other tall, slightly built, with aquiline features, coming from the West, and allied to the Libyan. There was also the dynastic race which was very similar in physique to this last, and which came down the Nile from the South.

This is in accordance with their own account, which speaks of three races.

The language shows Semitic affinities ; but this in nowise contradicts the evidence of science as to the race-type, indeed it affords further proof. For the parent stock of the Egyptian and Semitic races originated in North Africa, west of Egypt. In prehistoric times a portion migrated to Arabia and evolved the Semitic characteristics ; the portion remaining in Africa gave rise to those races of which the Egyptian became the most important and the most characteristic, and which, migrating from the West into the Nile Valley, evolved the most magnificent civilization on record.

The personal appearance and physique has been preserved for posterity on the monuments and tomb decorations ; the annals add details of their private life, customs and character. The aristocrat was tall and slender, and had a noble and dignified

Their Temperament and Domestic Life

carriage ; he had broad shoulders, muscular limbs, slight hips, and fine hands and feet. The shape of the face is marked by the length and breadth being nearly the same ; the nose is straight or aquiline, the eyes large and dark, the hair wavy, and the teeth small, even and very white ; the whole expression is charming, gracious and yet proud. The peasant was not so tall, but had the characteristic proportions of face, the broad shoulders, and the slight hips that distinguished the race.

They were a light-hearted people, simple in their ways, gay and nonchalant, with a childlike naïveté that was irresistible. Full of wit and humour, they seasoned the cares of life with laughter. They were industrious by nature and capable of very hard work, and being endowed with a buoyant disposition they preserved a contented cheerfulness, even amid poverty and strenuous toil.

The picture would not be complete without mentioning their genial and courtly manners and the kindly gratitude for even trifling services, that caused the ancients to remark, that "of all people the Egyptians retain the highest sense of a favour conferred upon them, deeming it the greatest charm of life to make a suitable return for benefits they have received."

They were essentially the lovers of the beauty of the world. The rhythm of music and the dance, the perfection of form, delicate perfumes, glowing and harmonious colouring, all this appealed to their imaginations and invested life with a glamour.

The artistic temperament of the race found an outlet in a gorgeous ceremonial which combined and utilized all these forms of beauty ; and at the same time it expressed itself in an art, individual and strong, which in its own line has never been surpassed.

With glowing enthusiasm Herodotus says : "No country possesses so many wonders, and has such a number of works which defy description. The people also, in most of their manners and customs, exactly reverse the common practice of mankind." The last part of this remark alludes chiefly to the position of women, who enjoyed all the privileges of men.

The Civilization of the Ancient Egyptians

This was entirely contrary to the custom in Greece, where they were kept in an almost Oriental seclusion. In fact, their privileges evoked so much surprise, that the Greeks went so far as to say that woman was supreme in Egypt, and that the man promised obedience to her in the marriage ceremony. It was the custom to have only one wife, and both in the palace and the cottage the wife appears to have shared the responsibilities of life with her husband, as equal. The Queen's name is coupled with the King's in edicts and documents. If the King died, the Queen continued as sole ruler. Several of Egypt's notable sovereigns were women. Descent was traced through the mother. Property in land belonged to the woman, and was inherited through her. The Land of Egypt was no exception, it was the property of the Royal Daughter, and the man who became King acquired the kingdom through marriage with the Princess.

Foreign to modern ideas was the frequent custom in the royal family of marriage between brother and sister; it was considered as the most suitable and fitting alliance. It must, indeed, have been a general custom, especially where there was landed property; for in the literature and love songs, the words brother and sister bear the same significance as beloved and lover, or as husband and wife.

Affectionate and faithful by nature, the domestic life seems to have been unusually successful. The wife accompanied her husband on his fishing and shooting expeditions. At home they are seen sitting arm in arm on the "double chair" so common in Egyptian houses (Fig. 1); the children sit at their feet, the youngest on the mother's knee, the eldest at the father's side, a delightful picture of a united and happy family! The terms of endearment which they used in addressing each other, and the pet names of the children, Pretty Kitten, Little Sweetheart, Eyes of Love, show forth a sweetness and tenderness that draws them very near, and, spanning the gulf of countless years, proves humanity to be one at heart in every age and clime.

"A man's own house is the best thing," one ancient writer¹

¹ Gunn's translation of Ptah-hotep and Kegemni.

Their Temperament and Domestic Life

urges, and the young man "is wise who founds for himself a house and loves his wife."

The ambition of every Egyptian father was to hand over his office to a son, for the sons followed the trade, occupation or profession of the father. Much is also said about the duties of the children to the parents. In old age, if the son was not prepared to help them, the daughter was obliged to support them by law. This seems curious; but as she inherited the estates it was, after all, quite natural. The son had other responsibilities; he was obliged "to cause his father's name to live," to perform the elaborate ceremonial, to offer the necessary sacrifices, and to maintain the tomb in a style appropriate to the rank of the family. Although he fulfilled these duties to his father, his love and devotion to his mother were great; and very frequently when he died, a statue of his mother, proving his descent, was placed in his tomb.

A father is represented as saying to his son, "I gave thee thy mother, she that bore thee with much suffering. . . . She placed thee in the House of Instruction for the sake of thine instruction in books; she was constant to thee daily, sending



FIG. 1.—"At home they sit arm in arm on the double chair." Both wear wigs, and robes of fine linen elaborately goffered (1587-1328 B.C.).

The Civilization of the Ancient Egyptians

loaves and beer from her house. When thou art grown up, and hast taken to thee a wife, being master in thy house, cast thine eyes on her who gave thee birth and provided thee with all good things, as did thy mother. Let her not reproach thee, lest she lift up her hands to God and He hear her prayer."

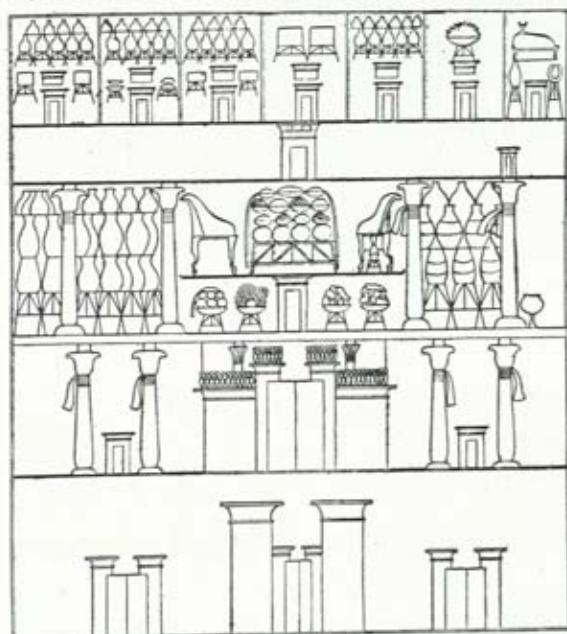
The mother brought up her children, maintained and educated them in their youth, and passed on the property to the eldest daughter. The father superintended their moral education (to judge by the many "Instructions" that remain!), arranged the occupations of the sons, and handed over his position to his eldest son : thus the family was knit together, not only by affection, but by mutual duties and responsibilities.

Much of their life was spent out of doors. The rich had spacious gardens, cool verandahs, and shady balconies. The rooms opened off courts or corridors arranged so that the "cool North wind" could circulate freely. The houses, generally of brick, were stuccoed over and gaily painted. Very large houses in the capital were four or five storeys high, and covered a considerable area. The palace of Amten, one of the Princes of the South, was a great square building 300 ft. each way. Very frequently a wall enclosed a large estate, within which was the nobleman's dwelling, stables, granary, storehouses, ponds, game preserves, and servants' quarters—a village in itself. Many houses were of wood, and of these several models remain, as at one time it was the fashion to have a sarcophagus made like the exterior of a house. Three doors on the long side, lattice windows, a handsome cornice, and a flat roof were the distinguishing features of this style.

Mery-ra was so proud of his house that he had two views of it painted in his tomb (Figs. 2 and 3). From this it can be reconstructed. There is a great central gate flanked by two small doors in the surrounding wall ; these lead into a court where servants are sprinkling water to lay the dust ; immediately opposite the great gates is a pillared vestibule which led into a porch ; on each side there is a smaller room : and all three open into a large hall, the roof of which is supported by twelve columns. This is the dining-hall, and it is prepared for a banquet, for the long centre

Their Temperament and Domestic Life

table is laid. It is adorned with flowers and fruit, and there are loaves of bread, roast meat and birds on smaller tables at each side.



Lepsius, *Denkmäler.*]

FIG. 2.—Mery-ra's House.

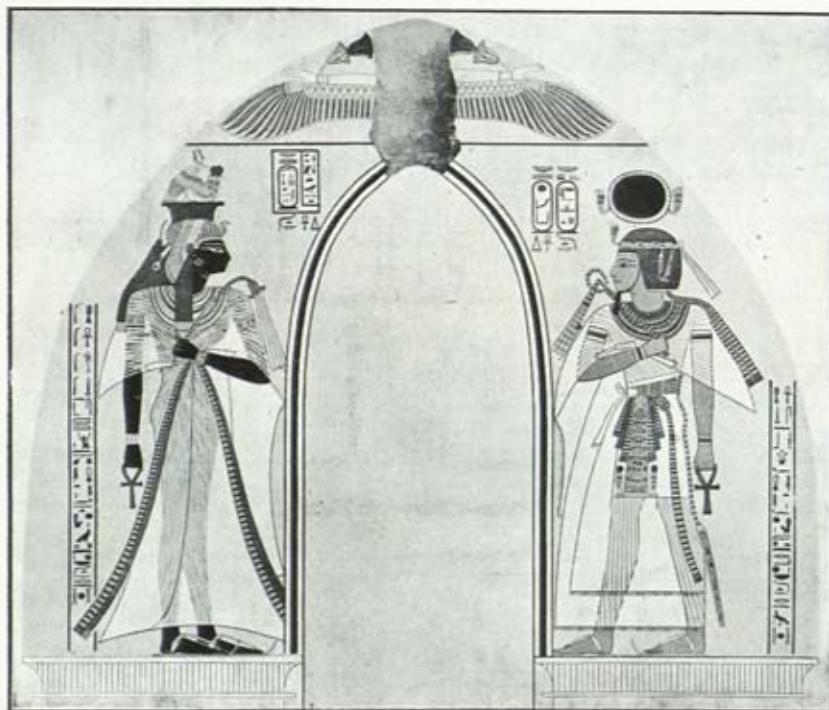


Lepsius, *Denkmäler.*]

FIG. 3.—Mery-ra's House, another view.

The Civilization of the Ancient Egyptians

A row of jars of wine stands ready at the back. Two luxurious chairs are placed at the head and foot of the table ; near one is a basin and ewer for the perfumed water which was, even in those days, poured over the hands before and after meals ; another stand bears the garlands of flowers that were always bestowed on the guests. Passing from this festive chamber, a corridor is reached



Lepsius, *Denkmäler.*]

FIG. 4.—Elaborate Royal Dress (New Kingdom).

from which two doors lead into spacious storerooms. A third door opens into a good-sized lobby which leads into the two kitchens : the family took care to have the odours of cooking well shut off from the dining-room ! The corridor leads also into a small hall, perhaps a dressing-room, beyond which is a large bedroom. This contains a carved bedstead with a soft down bed and pillows, and two toilet tables. Splendid rugs were always used for the floors and frequently for door hangings ; so,

Their Temperament and Domestic Life

although they are not seen in the pictures, such rooms would certainly have them. Chairs and stools of elegant shapes furnished the rooms. These were frequently covered with leather, stamped or painted; down cushions, handsomely embroidered, or covered with gold and silver tissue, lay about on the couches. The toilet tables were adorned with ornamental fittings, ivory boxes, and alabaster pots for khol, highly polished metal mirrors, exquisitely coloured and cut-glass bottles for perfumes, indeed everything that could possibly be required for an elaborate toilet.

The costume of both men and women varied slightly from age to age, but was at all times simple, although frequently of rich material (Fig. 4). The favourite stuff was pure fine white linen, and sometimes this was starched and goffered most elaborately. Although the dress of the men shows greater variety than the clothes of the women, a plain kilt seems to have been the most popular. This often had an embroidered end and a beautiful jewelled girdle. Sometimes the upper part of the body was bare, or a fine gauze vest was worn. A broad handsome necklace and



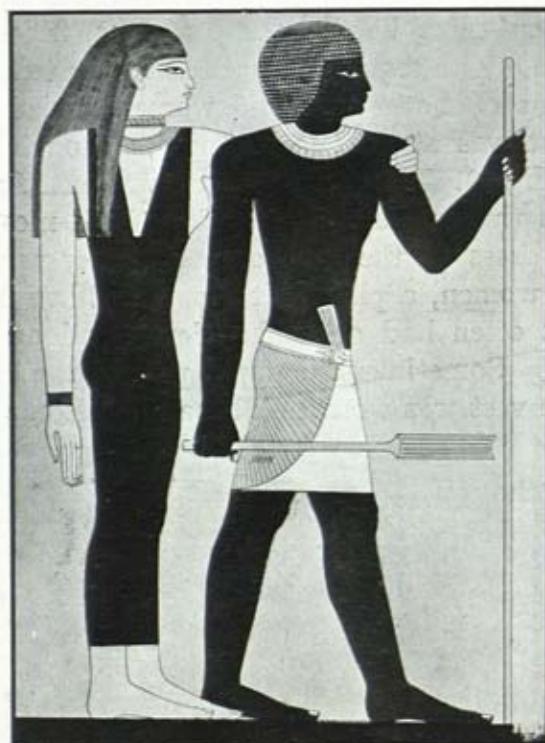
After Wilkinson, ii. 323.]

FIG. 5.—1. Ceremonial Dress of the King. 2 and 3. Kilts with ornamental belts having embroidered ends, such as were worn by kings and princes.

The Civilization of the Ancient Egyptians

bracelets completed the costume. The King's dress (Fig. 5) only differed in being either woven of, or embroidered with, gold, and the kilt was further adorned with a lion's tail !

A loose robe with large sleeves was worn occasionally. Sometimes the kilt is quite long, more like a skirt, but the pictures suggest that this was worn over the kilt (Fig. 4).



¹ L. D., Ab. iii. Bl. 1.]

FIG. 6.—Princess Sedet and Prince Nereb of the 1Vth Dynasty (4748-4556 B.C.), showing the simplicity of royal dress.

The poor people wore short linen drawers or merely a fringed girdle (Fig. 17A, p. 21).

The women's dress consisted of a tight gown from the waist to the ankles ; it was high waisted and kept in place by braces which passed over the shoulders (Fig. 6). A loose cloak without sleeves is seen in some pictures ; also sometimes an overdress, not so

¹ Lepsius. *Denkmäler*, hereafter referred to as L. D.

Their Temperament and Domestic Life

tight and with large sleeves, was worn (Fig. 4). Every one went either barefoot or wore sandals, as they pleased. Some sandals are exquisitely embroidered. Others are very like modern shoes.

The children very rarely wore any clothes—a most hygienic fashion for infancy in a hot climate! As they grew a little older they were promoted to a girdle, and after that they wore the ordinary dress of the period.

The race had a passion for cleanli-



[Royal Scottish Museum.]

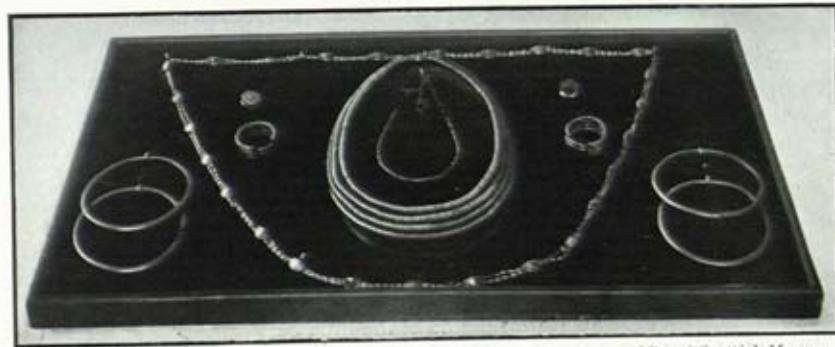
FIG. 7.—Handsome Bracelets—heavy—
of a twisted pattern.



[Royal Scottish Museum.]

FIG. 8.—Beautiful Gold Ring be-
longing to Nefertiti, the wife of
Akhenaten (1383-1365 B.C.).

ness; dirt of any kind was an abomination to the ancient Egyptian. This led them to shave both face and head; but as this last was very unbecoming, wigs were worn. Some of these



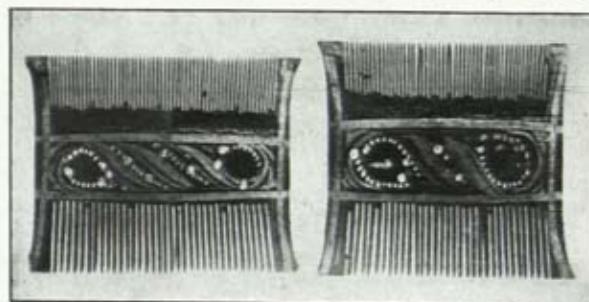
[Royal Scottish Museum.]

FIG. 9.—Jewellery. Gold Ear-rings, Bracelets, Necklace, and Girdle. The girdle
is of electrum (an alloy of gold and silver) and is of exquisite workmanship
(about 1600 B.C.).

are very elaborate, with curls to wear on festive occasions. The women seem to have adopted the custom also, but sometimes they wore their own hair curled and braided.

The Civilization of the Ancient Egyptians

Frequent baths were taken. Indeed the priests bathed twice a day and twice during the night! Cosmetics, ointments and perfumes were in use. To increase the beauty of the eye, the lid

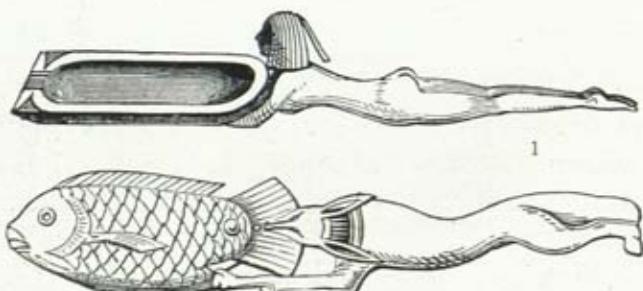


[*Royal Scottish Museum.*]

FIG. 10.—Two Black Combs with a Painted Design.

or eyebrow was darkened by a moist black powder, kohl; frequently, too, the fingers were stained red with henna.

After the bath, a scented ointment was applied to the head and body, the eyes were enlarged and darkened with kohl, and the hair



After Wilkinson, i. 160.]

FIG. 11.

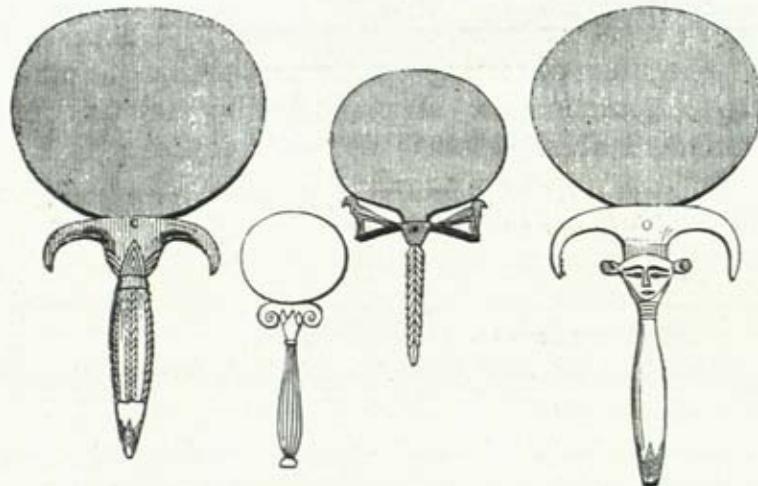
1. Toilet Box being borne by a Girl swimming.
2. A Fox seizing a fish by the tail. The fish revolves on a pin and forms the lid of the little box.

combed out, curled, braided, and fastened in place with a golden fillet and golden pins; a flower, generally a lotus, was pinned in the hair; a spotless white linen gown was donned, and, finally, the jewellery: and then the silver mirror reflected the finished picture of an Egyptian woman of fashion!



After Wilkinson ii. 344.]

FIG. 12.—Toilet Boxes for holding Cosmetics, such as Kohl for the eyes, Henna for the fingers, and Perfumed Oils to anoint the body after the bath.



After Wilkinson, ii. 346.]

FIG. 13.—The Mirrors were of silver and other metals, with ornamental handles often inlaid with coloured paste or polished stones.

CHAPTER II

EDUCATION

"Tis only the learned man who rules himself."

IN Egypt every one was at least taught the "three R's." At four years old the child became a "writer in the house of books." Writing was the foundation of their education, just as reading is the basis of ours. We possess many of their childish efforts, copy-books with the teacher's corrections in them. The daily task was generally three pages, and often on the reverse we find sums scribbled down, or delightful little drawings of animals. Arithmetic was taught in the modern way by games,¹ which the children "learn as a pleasure and amusement. They have to distribute apples and garlands, . . . they arrange pugilists and wrestlers as they pair together by lot or remain over"—this reminds us of the modern system of casting lots for the pairs of players in tennis and croquet tournaments. Apparently also they did "practice" sums, and had object-lessons; domestic economy was not forgotten, for "another way of amusing them is by distributing vessels, some in which gold, brass and silver, and the like are mixed; they adapt to their amusement the numbers in common use, and in this way make more intelligible to their pupils the arrangements and movements of armies . . . and in the management of a household they make people more useful to themselves and more awake."

Swimming, and the sacred songs and dances, completed the elementary education; but attention was paid to manners and morals, as well as to the mind and the body.

Lessons were over at noon, and then the children rushed off,

¹ Plato.

Education

"shouting for joy."¹ Discipline was enforced : "Spend no day in idleness, or thou wilt be flogged."²

After this elementary schooling, the boy was next instructed by his father in a handicraft. Those children, however, who were destined for the learned professions passed from the Writing School to the University. Sometimes, indeed, a child began work at a special school attached to some department of the Civil Service. We have a letter showing this, written by a youth, in after life, to his master : "I was with thee since I was brought up as a child ; thou didst beat me, and thy instructions went into my ear." The favourite profession of all was that of Scribe. It was a title, however, of very wide import, and embraced all grades, from the obscure little clerk to the great heads of the Administrative departments, and of the Army and the Navy ; it was the open door to success in life, and there was nothing to hinder any boy from attaining fame, riches and rank.

At one time the School for Scribes was attached to the Court, and whoever entered for this "princely profession," whatever his original rank, was "brought up with the children of princes." Of course, the majority remained obscure all their lives, and occupied insignificant posts as Registrars in villages. The ambitious and clever boy was told to "set to work and become a scribe, for then thou shalt be a leader of men . . . he who is industrious and does not neglect his books, he may become a prince, or perhaps attain to the Council of Thirty ; and if there is a question of sending out an ambassador, his name is remembered at Court."³

To enter the Diplomatic Service and be sent on an embassy was, indeed, a position to be coveted ! No other walk in life opened up such possibilities for promotion, so we are not surprised at the enthusiasm for this career. As a somewhat sarcastic poet⁴ says—

"I have never seen the smith as an ambassador
Or the goldsmith carry tidings!"

There was a military school for boys intended for the Army ; the "Royal Stable for Education" was its somewhat obscure

¹ Sallier papyrus.

² Anastasi papyrus.

³ Anastasi papyrus.

⁴ Sallier papyrus.

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name; and we read of a certain Beken Khonsu who, having been entered as a cadet when four years of age in such a school, became, at the age of sixteen years, "Captain in the Royal Stable for Education."

The young Princes frequently entered the Army and became "chief charioteers to his Majesty." To be admitted to the



After Wilkinson, i. 371.]

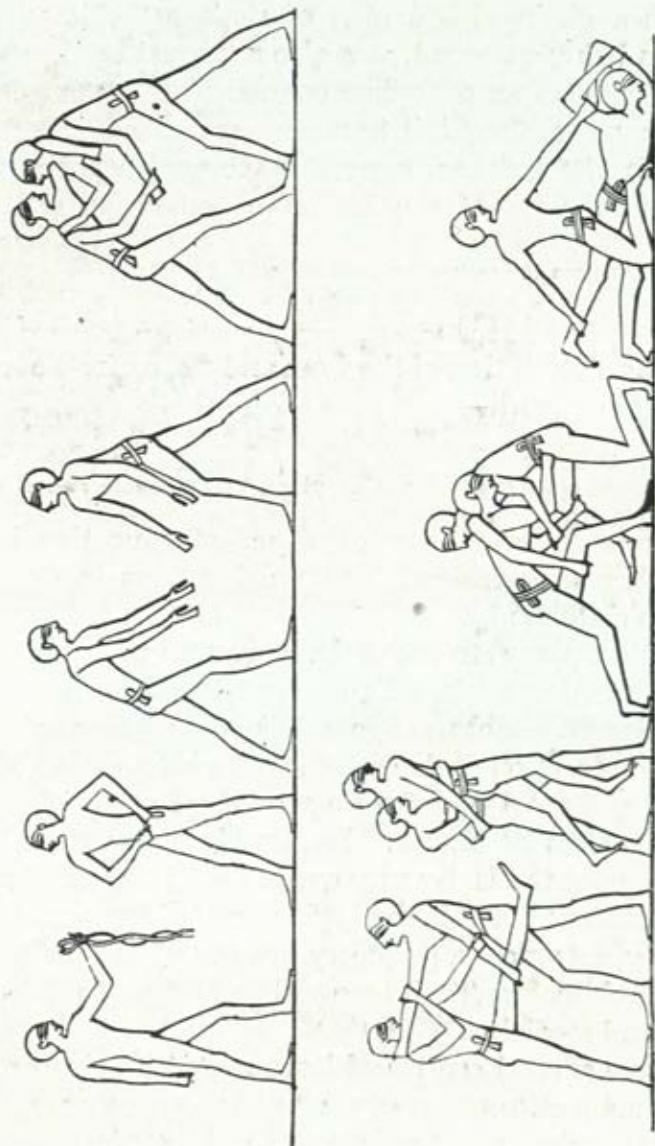
FIG. 14.—War Chariot of the young Prince, the son of Rameses II.
The charioteer is apparently instructing him.

Chariot Force was a delight that no boy could resist. A poem¹ describes his duties and his joy—

"He hastens to lay hold of the horses
In the stable before his Majesty.
He receives beautiful horses,
And rejoices and exults,
And returns with them to his town."

But it was not all play, and if the young cadet did not work hard and distinguish himself at the frequent manoeuvres and reviews, he was treated to "a hundred stripes." The children of peasants frequently became soldiers, but prince and peasant alike had the same training. Their bodies were made strong, agile, and supple by athletic exercises of various kinds—drill, gymnastics and wrestling (Fig. 15). Even in this profession a scholarly education was necessary for the higher appointments, and the Diplomatic Service seems to have been recruited from among

¹ Anastasi papyrus.



After Wilkinson, i, 205.]

[*Bent-Hassan.*,

FIG. 15.—Wrestlers advancing, attacking, holding, and the final fall of one of them.

The Civilization of the Ancient Egyptians

the Officers as well as the Scribes. There are a number of letters extant from a distinguished man of rank, a "chief charioteer," who, besides being a general, was also a "royal ambassador to all countries, the governor of foreign countries and peoples."

The Army and the Civil Service seem to have been equally popular with the public; one poem compares their merits, or rather, extols the life of the Scribe to a partisan of a military career—

"Oh, what does it mean that thou sayest:

'The officer has a better lot than the scribe'?

Come, let me relate to thee the fate of the officer, so full of trouble."

Then follows a description of the woes and discomforts of a military campaign, ending with—

"Therefore, O Scribe,

Reverse thine opinion about the happiness of the scribe and of the officer."

There were apparently two systems of education in Egypt; children either were trained for special careers in departmental schools from childhood, or they first began in the ordinary Writing School and then passed to one of the Universities.

Clemens of Alexandria tells us that the Egyptians possessed forty-two Sacred Books. From his description of these we gather that one section dealt with the Art of Education, or, in their own parlance, the Art of "Causing to become," which was in the hands of one class of priests. It also gives us some idea of the immense scope of the University curriculum in those days, which included writing, both hieroglyphic and hieratic, geography, cosmography, astronomy, geometry both practical and theoretical, surveying, architecture, sculpture and painting, ritual dancing and music, law and medicine.

There were several centres of learning, each being pre-eminent in a special subject.

The great ecclesiastical college was at Khmunu (Hermopolis).

Tahuti, the God of Wisdom, was very appropriately worshipped here, and, assisted by the Goddess of "Literature and the Library," was the patron and protector of all seekers after wisdom.

Tahuti taught men the science of arithmetic and mensuration;

Education

pure mathematics; the laws of music, oratory and drawing; botany; the "ingenious art of painting in words and speaking to the eyes"; a system of medicine, and a theological code. It seems, therefore, that this great University was the seat of theoretic learning, while the applied sciences were more studied at Memphis and Heliopolis.

The Faculty of Medicine was a branch of the priesthood, and although the Egyptians boasted that they "were the healthiest of all mortals," the profession seems to have flourished.

There were oculists in vast numbers, for diseases of the eye were rife then as now. Dentistry had made great progress, for at Thebes mummies have been found with their teeth neatly stopped with gold!

Each complaint was treated by a specialist, and it is interesting to note that the gynaecologists were nearly always women. The medical student therefore had a vast choice before him, and after a preliminary course he was supposed to select one branch and make himself perfect in it. Indeed, by law no one was permitted to practise in more than one section.

If the youth displayed artistic talent, Memphis was his destination, to become a votary of the great God Ptah, "he who creates works of art."

But the most famous University of antiquity was at Heliopolis, the City of the Sun. As a seat of learning it was the most popular of all, and it was noted for the profound wisdom of the priesthood. They were called the "mystery teachers of heaven." The High Priest was the Astronomer Royal (Fig. 17); he wore over his robes the sacred leopard skin, spangled with stars. All his titles designate his high office, "he who is great in regarding"; "he who sees the secret of heaven"; and "Privy Councillor of heaven." The great subject of this college was Applied Mathematics, in its



FIG. 16.—Seker-Ka-bau, High Priest of Memphis, wearing the complicated collar of discs and crosses of his office (see p. 110).

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two chief branches of Astronomy and Physics. The student devoted his attention first to geometry ; this was tested by mensuration, surveying, and volumetric problems ; only afterwards did the higher branches claim his attention.

The Temple courts were crowded with foreigners eagerly seeking the benefits of the magnificent library and the thorough scientific training.

All the master minds of antiquity seem to have been educated here, and the University rolls present a brilliant galaxy of names. Moses there became learned "in all the wisdom of the Egyptians." Solon, the great lawgiver, owed his system to the teaching of the priests. Plato followed, and has left the records of his debt for us to judge how great indeed was his Alma Mater. Thales of Miletus received his education in science here, and as a result gave to the world the knowledge of electricity. Later on, the library and the University were transferred to Alexandria, and then we find Euclid in charge of the mathematical department. Ctesibus who invented the force-pump, and Hero the pioneer of the steam-engine, came to Egypt for instruction in mechanics ; Hypatia, too, who divides with them the renown of introducing the hydrometer, studied there, and afterwards rose to fame as a lecturer. And who can relate half the wonderful inventions that emanated from the mind of Archimedes, who is considered the greatest mechanical genius of that, or any other, age ! He was very young when he arrived at this University, but there he learned the fundamental principles on which his inventions were based. The hydraulic press, cog-wheels, pulleys, etc., are all attributed to him. Considering the marvels displayed by this race in hydraulic engineering, and



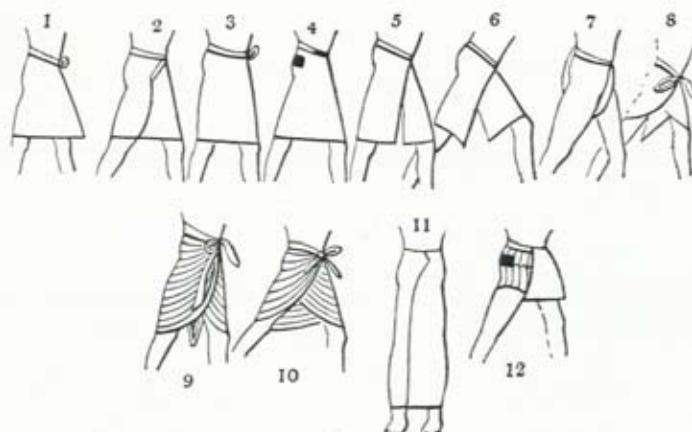
[Turin.]

FIG. 17.—Amen'anen, the Astronomer Royal, the High Priest of Heliopolis, and second Prophet of Amen under Amenhotep III. (1414-1383 B.C.).

and afterwards rose to fame as a lecturer. And who can relate half the wonderful inventions that emanated from the mind of Archimedes, who is considered the greatest mechanical genius of that, or any other, age ! He was very young when he arrived at this University, but there he learned the fundamental principles on which his inventions were based. The hydraulic press, cog-wheels, pulleys, etc., are all attributed to him. Considering the marvels displayed by this race in hydraulic engineering, and

Education

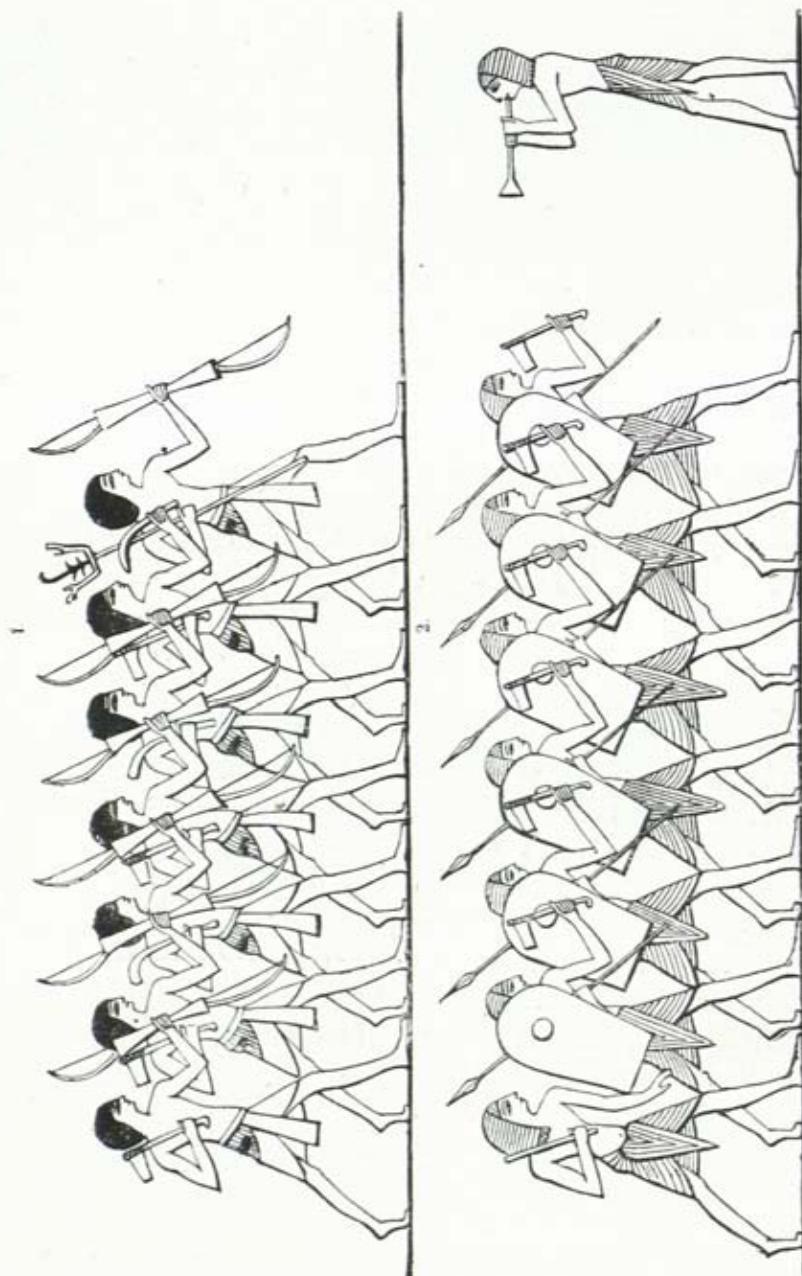
in the transport and erection of gigantic masses of stone, we cannot but think that all this mechanical knowledge was in existence, and that these great men only carried the inventions to the outer world, no doubt improving and developing them. Had they remained in Egypt we would probably never have heard of them. It is their work at the Courts of other nations, whither they carried the learning of the Egyptians, that has handed down their fame to posterity.



After Wilkinson.]

FIG. 17A.—Costumes of the Labouring Classes.





After Wilkinson, I, 338.]

[*Takes.* FIG. 18.

1. Archers armed with a bow and carrying an axe or boomerang.
2. Company of Spearmen advancing rapidly, being summoned by a trumpeter. The shield is slung on the right shoulder by a thong, leaving the arms free to carry the spear and battle-axe.

CHAPTER III

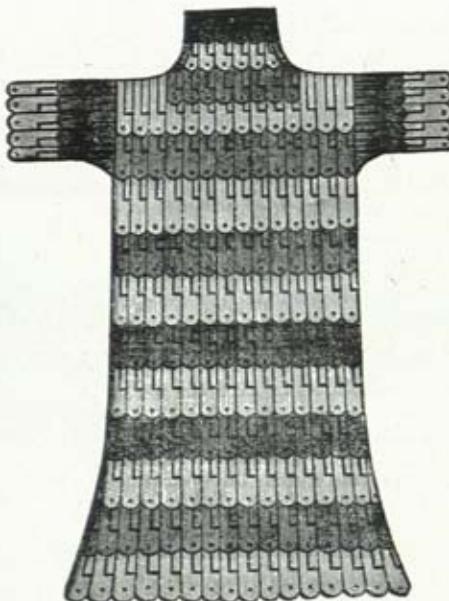
PROFESSIONS AND OCCUPATIONS

THE military profession ranked high, not only among the nobility, but also among the peasantry. No doubt this was because every soldier was allowed, free of all charge, eight acres of land. This



1

After Wilkinson, I. 367.]



2

[*Thebes*.]

FIG. 19.

1. Corselet richly embroidered in colours. (Rameses III. at Thebes.)
2. Coat of Scale Armour. The metal plates are fastened together with bronze pins.

was a wise decree, as it increased the feeling of responsibility, and gave the men a stake in the country they were asked to defend. Special military schools existed, and the training began in child-

The Civilization of the Ancient Egyptians

hood. All kinds of gymnastics were taught, so as to strengthen the muscles and cultivate hardiness and endurance; when older, the boys practised archery, and learned to wield the battle-axe and to throw a javelin; they then entered different regiments.

Perhaps the archers were the most important part of the Army; they were divided into companies of foot and chariot archers (Figs. 18 and 20). Regiments of light infantry carried the javelin, the lance

and a dagger, or a short straight sword; the heavy infantry bore spears and a curved sword. The cavalry, among other weapons, were armed with the battle-axe. Most of the regiments carried shields of bulls' hide (Fig. 18). There seem to have been several varieties, one very light and small, and others huge, pointed at the top, and entirely or half protecting the man who bore it; the latter were confined to the heavy infantry. Bronze helmets were sometimes worn, but the rank and file covered the head with a thick quilted cap, the colour of which varied with the regiments; some of these had fringes and some tassels. Coats of mail were worn



After Wilkinson, i. 405.]

[*Thebes*.

FIG. 20.—A Body of Archers going into battle, with quivers over their shoulders; quilted helmets, with coloured tassels, protect the head. The arrows are about thirty-four inches long, and are of wood or reed tipped with metal.

by the bowmen and the heavy foot soldiery, but the light infantry had quilted vests which could not impede rapid movement.

The chariot force was very important. Each car contained arms of various kinds, a charioteer, and one or two soldiers. In some cases the archers dispensed with a charioteer, and had the reins round their waists; a great tribute to their training of the horses, which no doubt were then driven by the voice. This, of course, left room for rapid movement in the car; and it was a frequent ruse of the archer, relying on the strength and flexibility

Professions and Occupations

of his bow, to lean forward suddenly and dexterously entangle his enemy in it as in a noose, then drawing him forward he would dispatch him with a sword (Fig. 105).

The cavalry, of course, was popular; the nobility and princes



After Wilkinson, i. 345.]

[*Thebes*.

FIG. 21.—The Standards of the Regiments.

were the chief officers in the regiments. When Sheshonk I.¹ marched against Jerusalem and sacked it, he had sixty thousand horsemen in his army; but the number seems to have varied at different times.

Each company had its own standard (Fig. 21), which was regarded with love and veneration by the men. The standard-bearer

¹ 952–930 B.C.

The Civilization of the Ancient Egyptians



FIG. 22.—War Galley in Action. The sail is furled. The fore-
castle and stern are raised and are occupied by archers; the
slingers are aloft. Some captives secured with handcuffs may
be seen. The heads of the rowers appear above the bulwarks.

marched briskly, the archers performing a fierce war-dance *en route*. When drawn up in battle array the heavy infantry formed the centre. Ten thousand strong, in close formation, a hundred men to a face, they constituted a solid phalanx which nothing could break.

Xenophon recounts a terrible battle between Croesus, who had Egyptian allies on his side, and the Persians. Cyrus routed the army of Croesus, but found the Egyptian phalanx absolutely invincible; so he was forced to conclude peace with honourable terms, assigning them large towns for settlement.

Round this massed square the light infantry and archers were disposed in open formation, the archers being in the wings; regiments lightly armed were also left free for skirmishing.

was always an officer of proved valour; he had a special badge with a device on it.

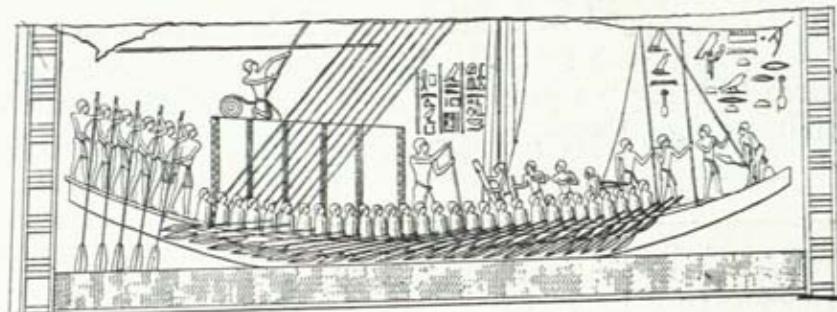
The Army was led into battle to the sound of music, the trumpet and the drum being conspicuous in the band. The regiments



After Wilkinson, I. 346.]

FIG. 23.—A Soldier springing to the attack
from the prow of a boat. [Thebes.]

Professions and Occupations

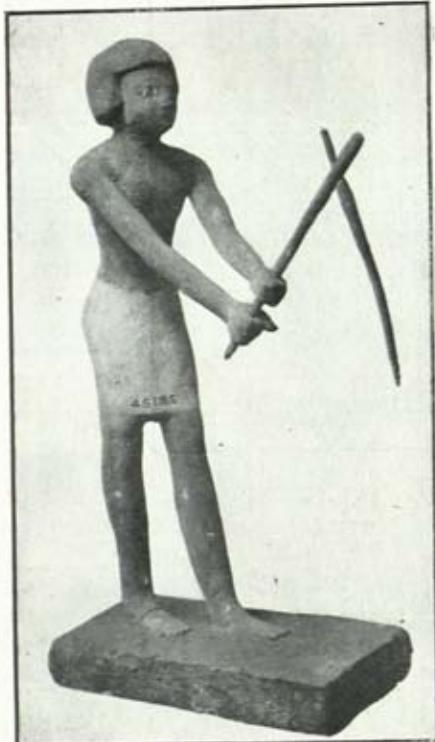


Lepsius, *Denkmäler*, Ab. II. Bl. 45.1

FIG. 24.—Medium-sized Vessel. Five men are steering, and there are thirty rowers on each side.

The Egyptians were essentially a maritime people; their boats navigated the Red Sea and the Mediterranean as well as the Nile. It is not then a matter of surprise to find they had battleships, and encountered the enemy in naval engagements (Figs. 22 and 23).

The men-of-war were not so high at the head and stern as the river vessels. They had a stout wooden bulwark to protect the rowers, and raised platforms for the archers, and were provided with grappling irons to drag the enemy to close quarters. They carried standards, and were commanded by admirals. The flagship apparently had coloured sails. Rameses II. had a fleet of four hundred on the Arabian Gulf. Some of the vessels were very large. He built one of cedar wood, 488 feet long; another, built much later, was 300 feet long, 45 feet wide, and 60 feet high. As well as a mast and sail, the boats were constructed to



(British Museum.

FIG. 25.—Peasant hoeing the Ground.

The Civilization of the Ancient Egyptians

carry rowers arranged in banks ; one ship carried 4000 rowers, 400 sailors, and 3000 soldiers. Ships were used extensively in commerce to bring the precious woods, spices, slaves, ivory and gold that enriched Egypt.

Honourable and popular as was the profession of arms, the art of agriculture was really the mainstay of Egypt.

As soon as the Nile fell the husbandman set about his preparations for the future harvest. The low-lying lands, which retained the water for a long time, were so soft that ploughing was quite unnecessary ; these fields were sown broadcast, and branches dragged along to scrape the moist earth over the seed.

The higher ground dried quickly, and had to be ploughed. The plough was a very simple affair made of wood. The point of the share was shod with metal. It had two handles and a pole to which were yoked two oxen ; no reins were used, but a man with a short stick drove the beasts while the ploughman attended to his furrow (Fig. 27).

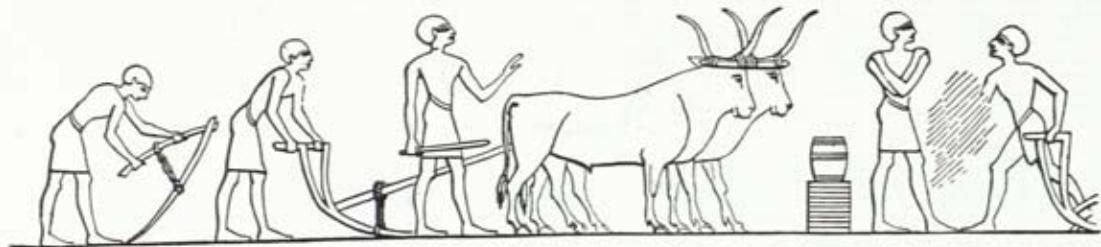
Grain in large quantities was produced in Egypt, and many scenes show the harvest. The wheat was cut just below the ear with a short sickle, the men working in rhythm to the music of a pipe, while a singer keeps time by clapping his hands.

A farm servant carries round beer in mugs, and the heated reapers pause and say, "Is it not good ?" "The master's beer is better than a cake of durrah!" (Fig. 27). No idling, however, is allowed ; the sharp eye of the overseer is on them, as he moves up and down the field. When cut, the corn is bound in sheaves and piled in panniers and carried on the backs of asses to the threshing-floor.



[British Museum.]

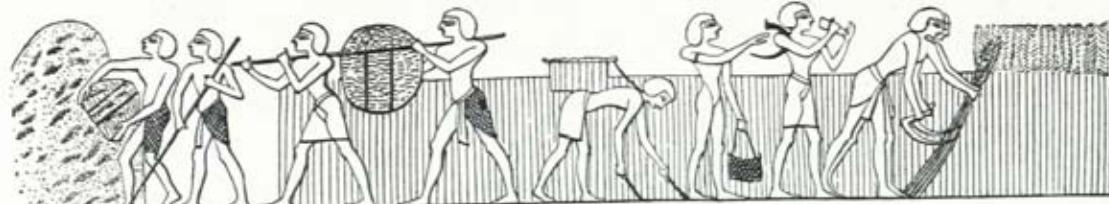
FIG. 26.—Peasant Woman carrying a basket on her head.



After Wilkinson.]



After Wilkinson.]



joins

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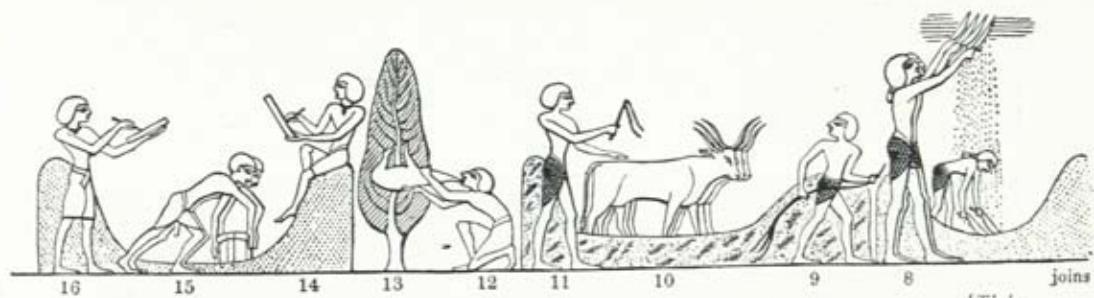
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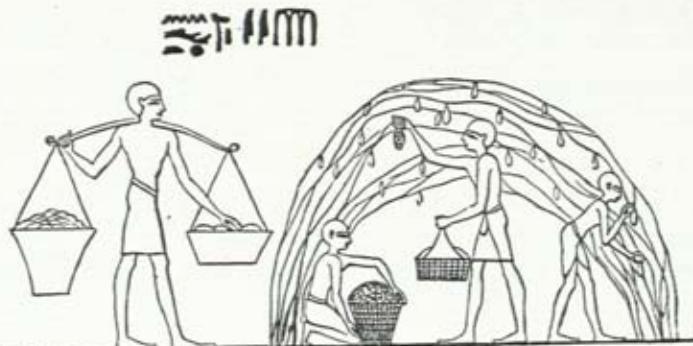
joins



[Thebes

FIG. 27.—Harvest Scene.

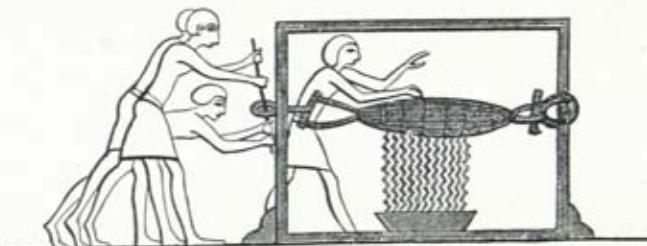
1. The reapers. 2. A reaper drinking from a cup. 3, 4. Gleaners : the first of these asks the reaper to allow him to drink. 5. Carrying the ears in a rope basket, the length of the stubble showing the ears alone are cut off. 8. Winnowing. 10. The *tritura* (answering to our threshing). 12. Drinks from a water-skin suspended in a tree. 14. Scribe who notes down the number of bushels measured from the heap. 16. Checks the account by noting those taken away to the granary.



After Wilkinson, i. 41.]

[*Thebes.*

FIG. 28.—The Vines. The men are picking the grapes and laying them in baskets, while a fourth man takes them to the wine-press.



After Wilkinson, i. 45.]

[*Beni-Hassan.*

A Simple Wine-press. The grapes are put into a bag suspended on a frame. The bag is twisted by a rod turned by the three men on the left. The man in the centre regulates the pressure ; the juice is received in a large bowl.



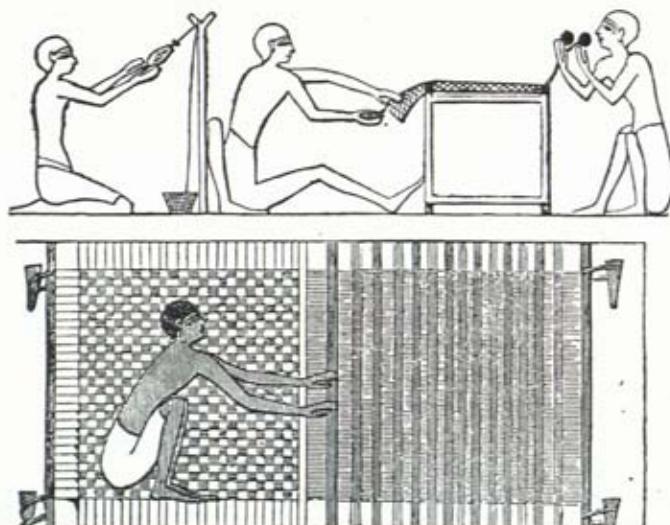
After Wilkinson, i. 46.]

[*Thebes.*

FIG. 29.—Large Wine-press. Ropes hang from the roof, and, holding on to these, the pressers dance energetically up and down on the piled grapes. The juice is collected in a reservoir, and then pours out by two pipes into tanks. On the right is the storeroom full of large jars. It is protected apparently by a small shrine containing an asp, before which are offerings and a libation jar.

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The donkeys are very trying, and it is only with much shouting and cracking of whips that the panniers are adjusted, the drivers crying to the unruly creatures, " Those who quit the ranks will be tied, those who roll on the ground will be beaten! Gee-up, gee-up ! " Sometimes, instead, two labourers carry the grain in great nets hung on a long pole. The threshing-floor was circular, and the grain was thrown down in a great pile all round the edge. A layer was strewn over the area, and more was thrown in by large



After Wilkinson, ii. 86.]

[*Beni-Hassan*.

FIG. 30.—Men Spinning ; below, a man is Weaving on a Loom.

wooden forks, while the oxen ran round and round treading out the seed, the drivers singing meanwhile—

" Thresh, oh ye oxen ! Thresh for yourselves !
Oh ye oxen, thresh for yourselves !
Thresh straw for your fodder, thresh grain for your master !
Take ye no rest, cool is the air this day." ¹

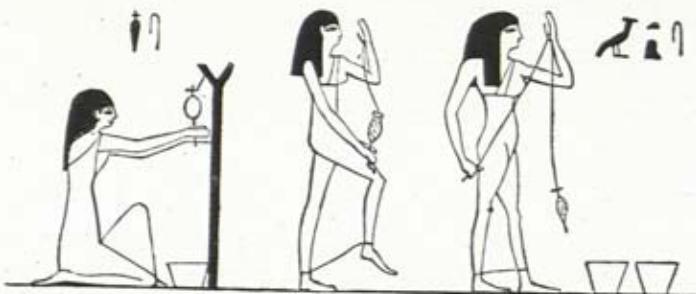
Several others with wooden implements tossed the seed into the air, winnowing it. Of course the ubiquitous Scribe was there, carefully noting the number of measures of corn carried from the threshing-floor to the granary.

¹ Wiedemann's translation.

Professions and Occupations

Durrah was never reaped ; it was torn up by the roots, and then the bundles were dragged through an instrument with teeth, which tore off the heads of grain (Fig. 27).

Some of the crops needed constant watering, so a party of labourers was told off to work the shadoof, otherwise the radishes, lettuces, French beans, peas, lentils, and other vegetables would have been ruined.



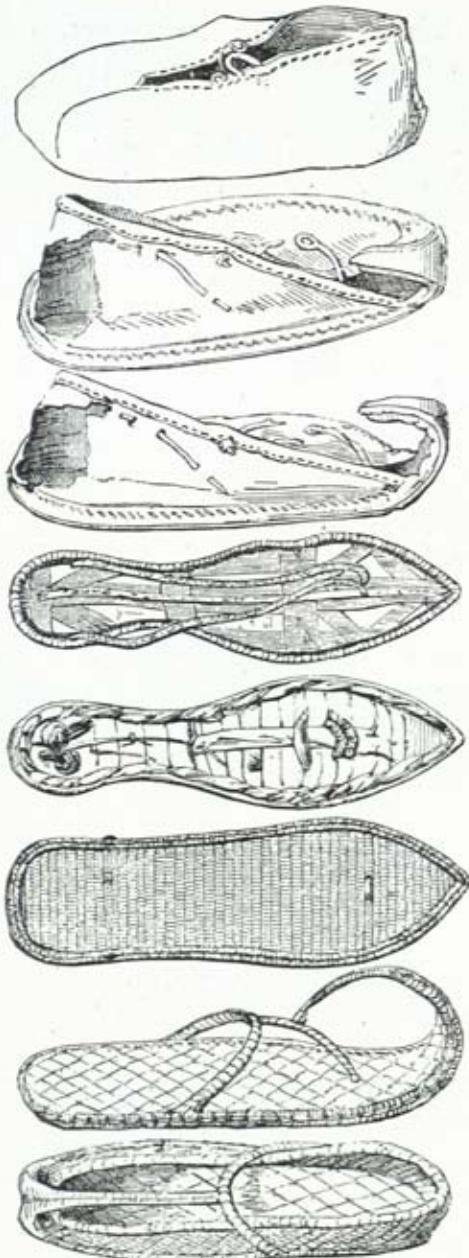
After Wilkinson, ii. 85.]

[*Beni-Hassan*.

FIG. 31.—Women Spinning the Flax and Weaving the wonderful Linen for which Egypt was famed.

Egypt was famed for its wine all over the ancient world. There were many varieties, both red and white. The vines were trained in bowers (Fig. 28) or on trellis work, and no garden was complete without its vineyard and orchard. After the bunches had been gathered, they were put into a bag which was twisted in opposite directions by means of two poles, the juice being caught in an earthenware bowl (Fig. 28). Large quantities were trodden by the feet, the men holding on to ropes as they danced energetically up

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After Wilkinson, ii, 335, 1.
FIG. 32.—Sandals, and Shoes of Green Leather.

and down; the juice ran out from the press, and was collected in large vats (Fig. 29). When the process was over, the wine was decanted into large earthenware jars, which were sealed up and stored away. The perfumed and delicate aroma of the Egyptian wine was remarked on by many authors.

A kind of beer was also much liked, it was called zythos, and was considered "scarcely inferior to the juice of the grape"; the smell was like wine, not at all like the beer of to-day.

Many farmers bred sheep and cattle. The herds were taken down to the Delta yearly to enjoy the rich grass. It was an exciting moment for the drivers when the inundation came down; the flocks and herds were then removed as quickly as possible to higher ground. In some scenes boatmen are towing the beasts across the waters; the shepherds splash through the shallows singing gaily—

"In the water walks your shepherd with the fishes.
With the cat-fish talketh he,
With the fish he changeth greeting
From the West! Your shepherd is a shepherd from the West!"

Professions and Occupations

Their great love of animals is shown even over the prosaic feeding of the oxen. A conversation takes place between the shepherd and the beasts. "His oxen said to him, 'Here and there the herbs are good.' And he heard what they said and drove them to the place of good herbs; and the cattle which he kept thrrove excellently and calved very often."

Horse-rearing was also very profitable; chargers and chariot horses were in great demand, and large exportations were sent to

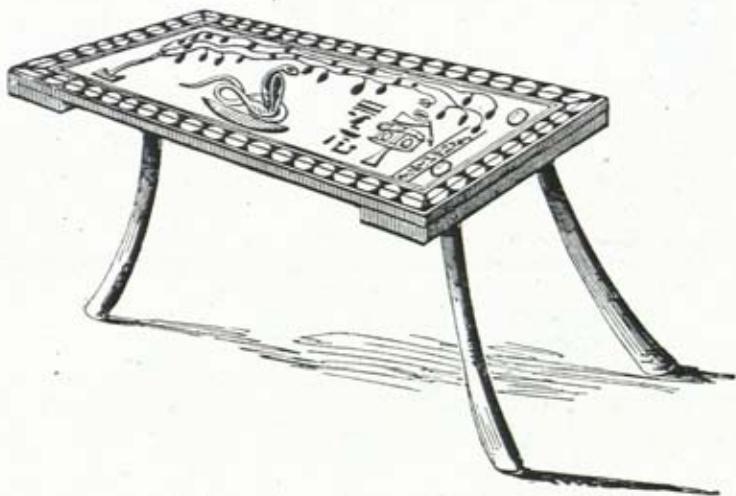


FIG. 33.—Wooden Table.

[British Museum.]

Syria. King Solomon preferred Egyptian horses, and purchased large quantities.

Sheep were kept for the wool. The lower classes wore woollen garments, and wraps and cloaks were made of wool also. To a certain extent wool was looked on as impure, and garments of this material could not be worn in the temples, neither might the dead be buried in such.

Flax and cotton were extensively cultivated. Cottons and muslins were used for household things, and for clothes to some extent; but every one who could afford it preferred to wear linen, very fine and beautifully white. Both men and women are seen weaving linen (Figs. 30 and 31). The fineness achieved is in-

The Civilization of the Ancient Egyptians

credible, and the threads are quite perfect, without the flaws which are seen to-day in our finest work. One piece found near Memphis has 540 threads to the inch in the warp, and 110 in the woof! Tradition makes mention of a wonderful corselet of linen, each thread of which was composed of 365 fibres! The garments of



[British Museum.

FIG. 34.

1. Stool of Ebony inlaid with Ivory.
2. Shows the inlaid parts of the legs.
3. Of ordinary construction, in the same collection.

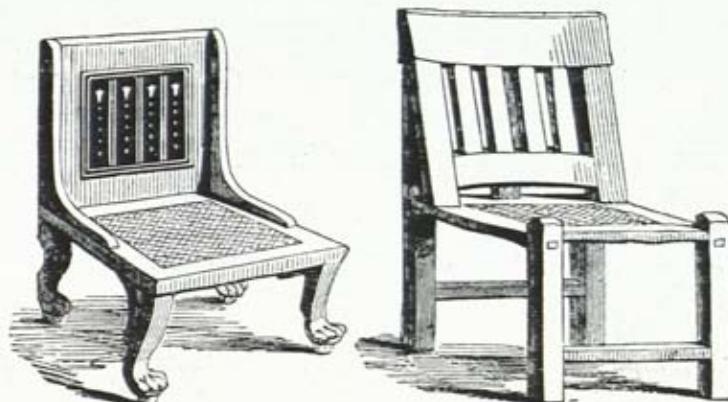
the rich were embroidered and dyed. The thread was often dyed before the cloth was woven, and thus a pattern was worked in.

The bandages used for the mummies were always of linen, and it is a noteworthy fact that every kind of bandage known in modern surgery has been found on the mummies, the limbs and bodies of which are exquisitely bandaged.

The leather workers formed an important part of the community. Many articles were made of leather: bottles for water or wine, shields, cases for bows and arrows, upholstering of the

Professions and Occupations

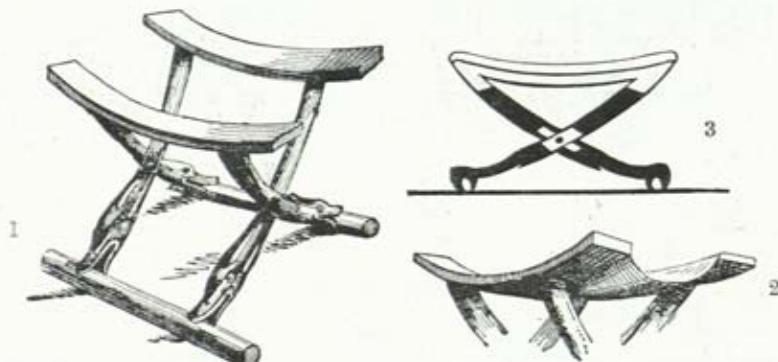
chariots or of the household furniture, girdles, shoes and sandals (Fig. 32). Some of the work was very ornamental, the skins being dyed first and then stamped and cut.



[British Museum.]

FIG. 35.

The carpenters and cabinetmakers were kept busy manufacturing the ordinary household furniture (Figs. 33-38). The



[British Museum.]

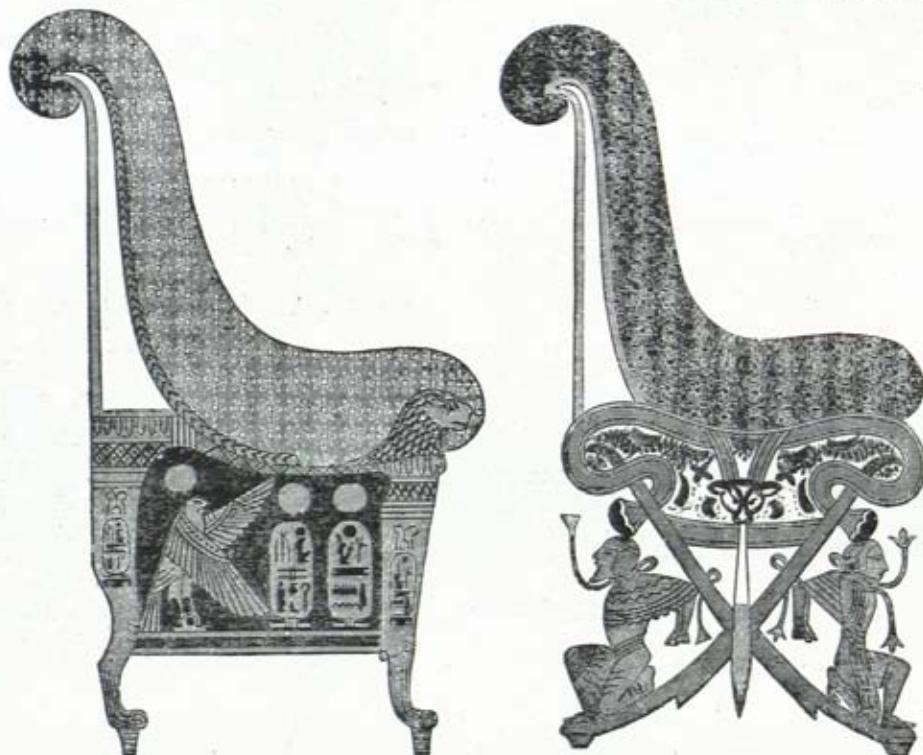
FIG. 36.

1. A Stool.
2. Shows the manner in which the leather seat was fastened.
3. A similar one cushioned.

designs were very artistic, the legs of the tables and chairs being carved in imitation of those of lions or goats, or sometimes like the

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necks and heads of geese. The seats were made of interlaced thongs of leather, or upholstered in skins painted with flowers, or dyed. Various woods were used, and the expensive articles were beautifully inlaid with costly woods of a different colour, or with ivory. Ebony and ivory was a favourite combination. Common woods were cleverly veneered and sometimes even painted to simulate



After Wilkinson, i. 60.]

[*Thebes.*

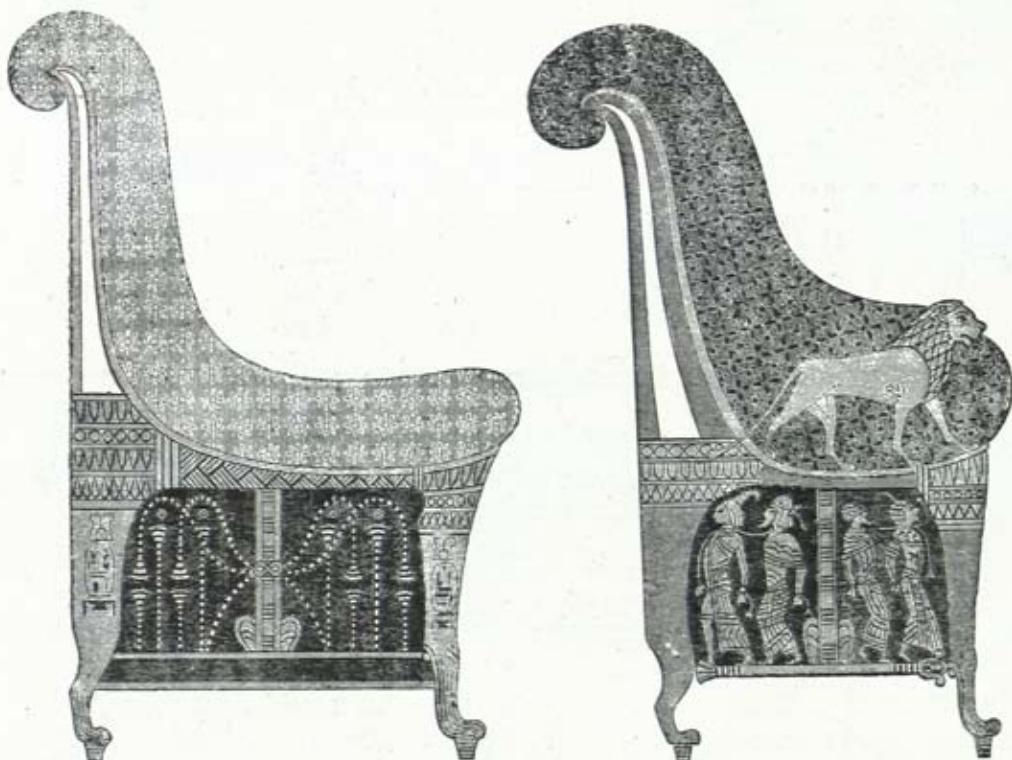
FIG. 37.—Chairs. The frames are carved in ebony inlaid with ivory, the cushions are stuffed with down and covered with tapestry. (Rameses III.)

the rarer varieties. Another curious substitute, especially used for coffins, was cartonnage, a kind of papier-maché or pasteboard, made of layers of linen pasted together and covered with stucco; it was then painted and gilded.

The shops in which all the commodities were sold were apparently not unlike the modern bazaars—a square room entirely open in front; the goods are all visible to the passer-by, and the owner

Professions and Occupations

sits among them on a raised seat, gossiping and sipping sherbet or coffee with prospective customers. The provision shops have rows of geese and fowls, all ready plucked for sale (Fig. 39). Sometimes the sellers squat on the ground with their wares, vegetables and fish perhaps, in baskets, while people wander up and down



After Wilkinson, I. 31.]

[*Thebes.*

FIG. 38.—Arm-chair with Carved Lions for the Arms. Captives are represented ignominiously chained below. The seats were covered with painted or stamped leather or with embroideries.

bargaining and exchanging necklaces for fish, or ointment for onions and melons !

In olden times the crafts merged into the arts, and it was very difficult to tell where the craftsman ended and the artist began. The beautiful jewellery, metal work and glass, should undoubtedly be included among the artistic productions of this age.

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The goldsmiths were extraordinarily skilful, and wrought wonderful necklaces, and jewels inlaid with brilliant enamels, cloisonné work. Sometimes instead of enamels between the fine strips of gold that formed the outlines, the inlay was of precious stones. This kind of work was especially used for the larger breast jewels,—jewels of office, perhaps. The ear-rings and finger-rings display great variety of design, and pearls were frequently used in the former.

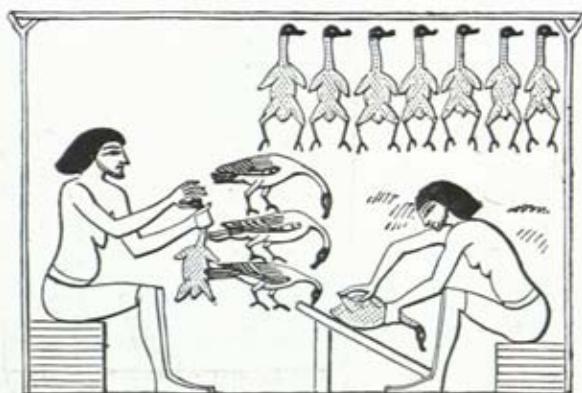
Rings were worn on all the fingers and on both hands, but the left hand seems to have been more frequently adorned than the right, and the “ring finger” was more often ornamented with them as with us. Their signet rings were generally of gold, set with a scarab or an engraved stone. The less fortunate and wealthy contented themselves with a blue porcelain seal-ring. Like most Oriental races, they loved gorgeous jewelery, and men and women equally, wore necklaces, bracelets, rings and anklets.

FIG. 39.—A Poulterer's Shop. Two men are plucking the birds, a row of which are hanging up for sale.

The goldsmith's art, even in the earliest times, had been brought to great perfection ; the designs are beautiful and unique, and the workmanship exquisitely fine.

On festive occasions, gold and silver cups graced the table ; in the royal household and the temples, gold plate seems to have been extensively used. The cups are beautifully engraved, and often studded with rare gems ; many have lids or covers, and have one or two handles or none at all.

In grace of form, the vases are equal to those of the ancient Greeks, but are infinitely older (Fig. 40). The artists who pro-



After Wilkinson, ii. 154.]

Professions and Occupations

duced them show a fertility of imagination both in the shape and in the ornamentation.

At Thebes many vessels of bronze have been discovered. They are highly polished and of good metal. The metal workers knew how to impart elasticity to bronze weapons and tools. They had some method, now unknown, of tempering bronze, so that it became as hard as steel. The edge of modern chisels is turned at once, on the hard stone on which *they* engraved with ease.

The bronze weapons of the princes and nobles were inlaid with gold. The handles of the weapons were very beautiful, ivory inlaid with gold and precious stones. Iron was undoubtedly used; also there are representations of butchers sharpening their knives on a *blue* metal bar. From its colour this can only be steel.

All the processes of metal working were known: smelting, forging, refining, tempering, soldering, alloying, inlaying, engraving and even gilding. The occupation was in high repute, and "The Chief of the Goldsmiths" is often mentioned; and one superintendent states that he "knows all the secrets of the Houses of Gold!"

Egypt abounds in suitable clay for pottery. Thousands of



After Wilkinson, i. 150.]

[*Thebes*.

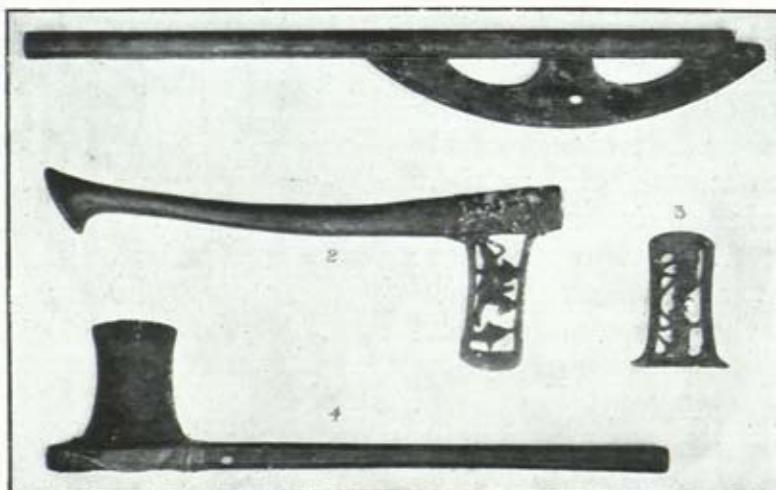
FIG. 40.—Vases with Ornamental Handles.
The second one was apparently of gold.

The Civilization of the Ancient Egyptians



[Royal Scottish Museum.]

FIG. 41.—Collection of Ancient Wooden Mallets used by the Egyptian stone-masons.

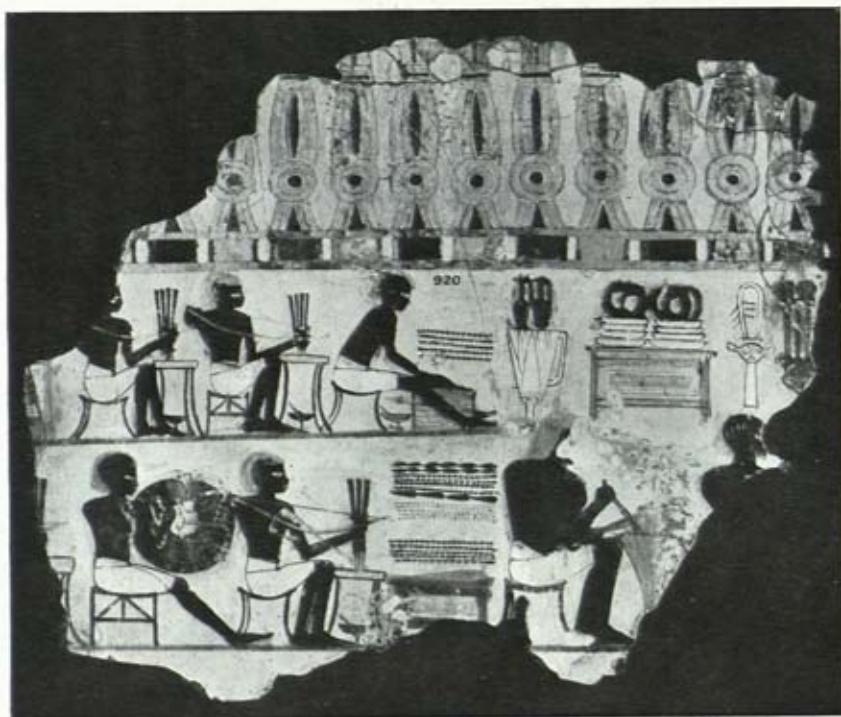


[British Museum.]

1. Bronze Halbert. The blade is riveted to the shaft, into which a wooden handle is fitted.
2. Worked Bronze Axe representing a soldier galloping. Leather thongs covered with bitumen bind the head to the wooden handle.
3. Another Worked Axe-head representing two bulls fighting.
4. Bronze Axe-head fastened to the handle by thongs of gazelle skin. On the blade is Men-Kheper-Ra, the praenomen of Tahutimes III., 1481-1449 B.C.

Professions and Occupations

years ago the potter kneaded the clay with his feet ; when it reached a suitable consistency, he placed a lump on a wheel and moulded it with his hand as the wheel spun round. The ornaments were then cut into the soft clay and the pots placed to dry, after which they were removed to an oven and baked. Beautiful vases and bowls for the table or for toilet articles were of faïence, and in



[British Museum.]

FIG. 43.—Metal-workers using Blow-pipe and Drill.

this art they were pre-eminent. Statuettes, bowls, vases, cups, and beads show a mastery of brilliant colour and glazing.

Blue and green were the favourite colours, although yellow and a fine red were also used. They did not confine their attention to pottery only, by some unknown process they could glaze cut stone.

Sometimes even a sarcophagus would be covered by a deep

The Civilization of the Ancient Egyptians

and translucent green glaze through which the hieroglyphic inscription stood out clearly.

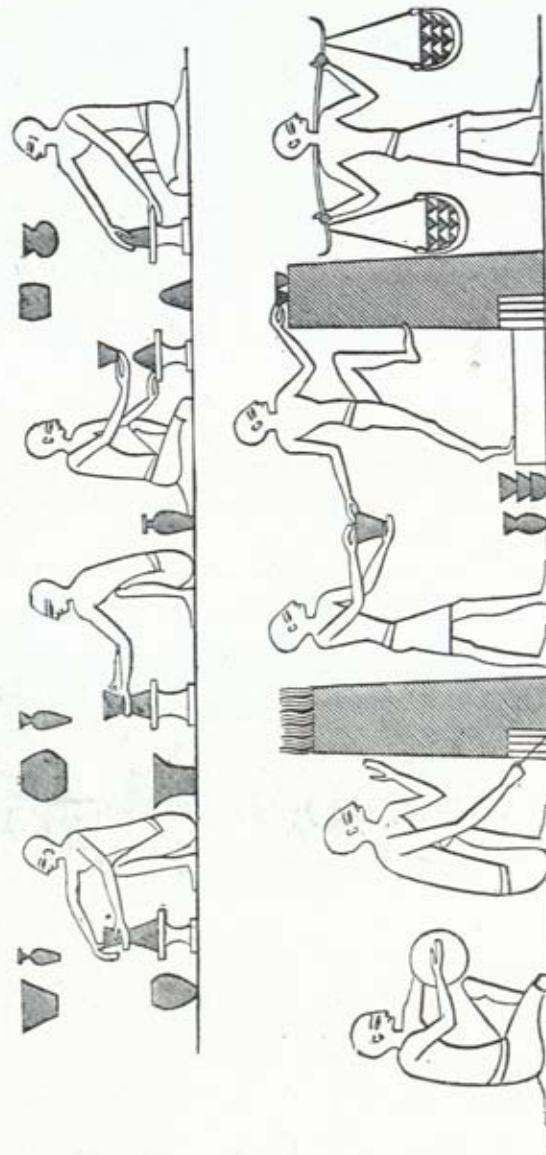
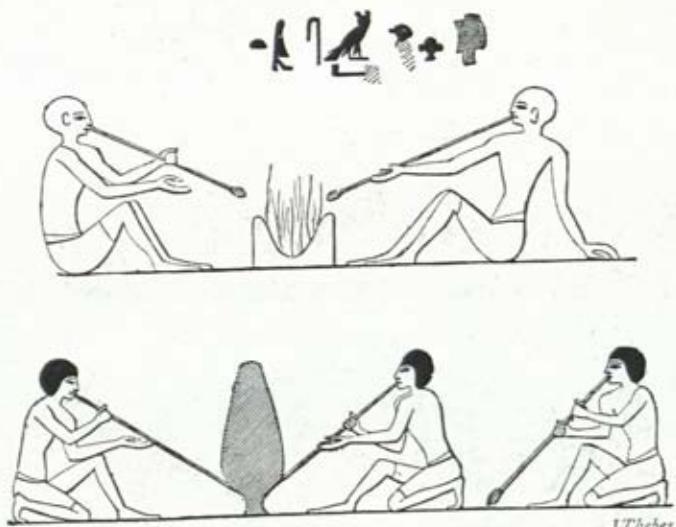


FIG. 44.—Potters at work. The pots are made on a wheel, then baked on the top of the furnaces and removed in baskets when finished.
After Wilkinson, ii. 108.]

An allied art in which they were equally expert, was that of enamelling, generally on gold; amulets and jewels were made in this kind of cloisonné. Glass mosaics were made in brilliant

Professions and Occupations

colours, the designs going right through. Glass-blowers are represented busily working at their trade; furnaces for fusing the material are seen, with men squatting on the ground using the blowpipe (Fig. 45). Glass vases, cups, bottles (Fig. 46), and beads are not only seen in the pictures, but have been found in the tombs. Hieroglyphics were engraven on the glass vases, and sometimes even on the beads. It is supposed that they used the diamond for this purpose, and for engraving on precious stones. The lapidaries were certainly experts at their work; their tools



After Wilkinson, ii. 58.1

[Thebes.]

FIG. 45.—Glass-blowers at work.¹ The glass to be blown, at end of the blowpipe is coloured green.

must have had graving points of some stone harder than quartz, for no tool, even of steel, can cut quartz. The jewel points were set in bronze; and as nothing but the diamond can cut such deep grooves as are found, it is presumptive evidence that the diamond was used.

Circular saws were used for hollowing out alabaster vases (Fig. 47), the cores were then removed; these have been found by the hundred. Sometimes the vase fractured, and was thrown on the rubbish heap. The reason why no diamond-pointed saws remain

¹ Professor Petrie interprets this as a jeweller's furnace, the men blowing up the charcoal to heat the crucible.

The Civilization of the Ancient Egyptians

to-day is obvious, the stones would be continually reset until they were worn away.



[*Royal Scottish Museum.*]

FIG. 46.—Glass Bottles from Egypt.



[*Royal Scottish Museum.*]

FIG. 47.—Alabaster Pots, some with Covers.

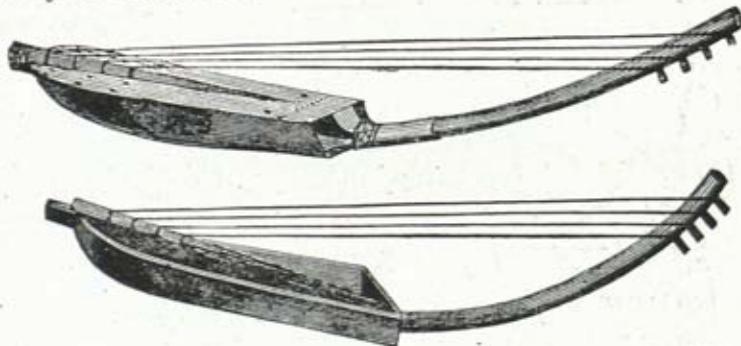
Many precious stones were cleverly imitated in coloured fusible pastes ; pearls, amethysts, and emeralds being so skilfully made as to deceive an expert. Pliny says that the imitations were so good that it was “ difficult to distinguish false from real stones.”

CHAPTER IV

AMUSEMENTS

"Celebrate the joyful day!
Cast behind thee all cares, and mind thee of pleasure."

THE amusements of the Egyptians were suitable to the gaiety of their temperament. Music and dancing were very popular. The wall paintings show many different instruments, and apparently it was customary to entertain the guests at a party by a concert, at which the most famous singers of the day performed, accompanied by an orchestra.



[British Museum.]

FIG. 48.—Instrument different from the harp, lyre, or guitar.

There were several varieties of harps (Figs. 48–50), some very large, with twenty-two strings, and others again were small, with only four strings. The very large ones were generally played by men. Their lyres varied as much, having from three to eighteen strings; they were played with and without a plectrum. The stringed instruments were often beautifully ornamented or gaily painted.

The flute was very long and was generally played by men

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(Fig. 51), and so was the pipe ; but the double pipe was frequently played by women (Fig. 53), who danced gracefully as they piped a melodious air.

Tambourines and drums completed the orchestra ; cymbals,



After Wilkinson, i. 108-9]

[*Thebes*,

FIG. 49.—Large Harp with ten strings. The frame is painted gaily and finished by a carving of the King's head. (Rameses III.)

crotala, and the sistrum (Fig. 55) were shaken in rhythm to the music of the other instruments.

It is no longer known how the music was written down, but no doubt there was some method, as it must have been complicated owing to the innumerable variety of instruments composing the

Amusements

orchestra. One author mentions that six hundred performers took part in a musical festival. At Memphis there was a great school of music, and women singers especially seemed to have been trained there. Many classic authors praise the extra-



FIG. 50.—Another Harp with fourteen strings.

ordinary skill of the Egyptian musicians, and state that the Greeks and barbarians were taught by Egyptians. It formed an important part of the education of children, as the study of it had an uplifting influence on their morals and emotions. It was both an art and a science, the laws of which were studied by the priests; no innovations were allowed, at least in the temple

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music. It has been said that Gregorian chants were derived from the Egyptians, also singing without words, "carolling,"¹ which was used in the service of the gods.



{Thebes.
(After Wilkinson, i. 127.)}

FIG. 51.—Very long Flute.

and women wore either a kilt or short drawers above the knee for the more active dances. Children are seen in girdles dancing to castanets.

There was as great variety in the costume as in the dance itself; and in one case the *corps de ballet*, clad in transparent gauze-like robes, is seen performing graceful undulating movements to the sound of the tambourine. As in all Oriental races, gesture and pose were important features, but there were certainly more active measures trodden by these dancers of old, and even thousands of years ago the high leap into the air, and the skilful pirouette, excited the admiration and the applause of the onlookers (Fig. 60).

Wrestling was very popular; many modes of attack and defence can be seen in the pictures.² In another scene two men are playing at single-stick. The stick has a guard to protect the knuckles, and on the left arm the men



After Wilkinson, i. 124.] [Thebes.

FIG. 52.—Musician playing a Guitar slung round the neck with a ribbon.

¹ Chappell's *History of Music*.

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wear a shield made of a straight piece of wood bound to the arm with three or four straps. Intricate games were played with a ball, chiefly by women, who juggled with several balls in the air while they stood on one foot or leapt upwards (Fig. 61). Part of this game was played by girls mounted on each others' backs (Fig. 62). No doubt the losers in the game became the beasts of burden in the next game, taking the part of the "asses" in the similar Greek game.

The feats of agility performed by the gymnasts and tumblers were remarkable. All the tricks which are known to-day seem



FIG. 53.—Girl playing the Double Pipes and dancing.



I
After Wilkinson, I. 123-4.]



[*Thebes*.

FIG. 54.

1. A Guitar with three catgut strings.
2. A Girl dances while playing on a Guitar.

to have been practised then for the amusement of the populace.

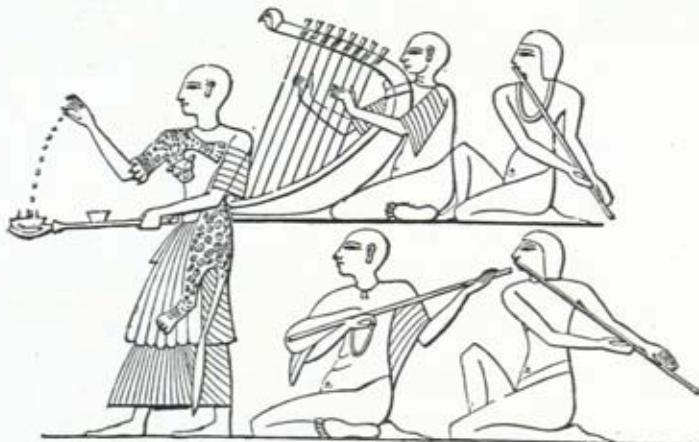
Great pleasure was taken in bull fights ; but they seem to have

The Civilization of the Ancient Egyptians

been carefully conducted in a fairly humane manner, without toreadors or picadors. The prize bulls were given names;



[British Museum,
FIG. 55.—Sistra.



After Wilkinson, I. 130.]

FIG. 56.—A Temple Orchestra of Flutes, Harp and Guitar plays, while the Priest, in his ceremonial dress, offers incense.

“Broad Striker” and “Favourite” are seen here having a duel (Fig. 64). The owner of the winner received the prize.

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The Egyptians were keen sportsmen, and their country provided ample opportunity and material for the chase. Stags,



After Wilkinson, i. 87.]

[*Thebes*.

FIG. 57.—A small Orchestra of a Harp, a Guitar, and the Double Pipes.

gazelles, wild goats and oxen abounded in the mountains, while hyænas, foxes and jackals prowled about the desert plains.

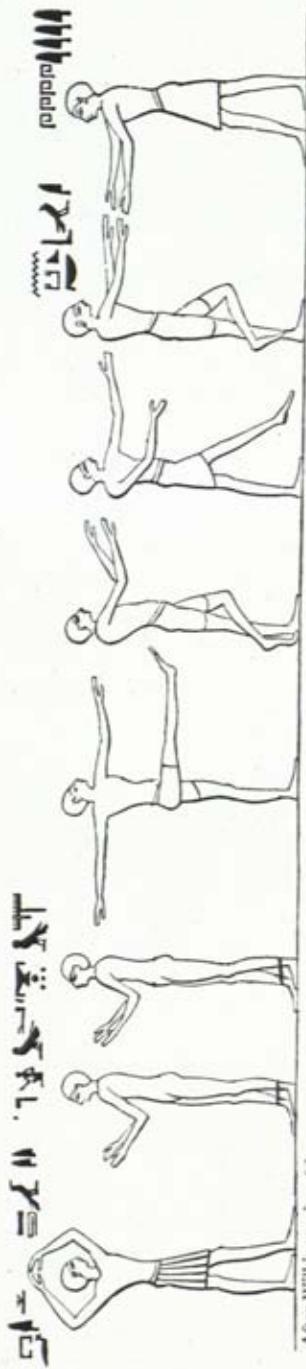


After Wilkinson, i. 116.]

[*Thebes*.

FIG. 58.—Two different types of Lyres. The girl on the left uses a Plectrum.

The nobles inclined for big game shooting found the hippopotamus, "extremely pugnacious and restless," in the marshes. They



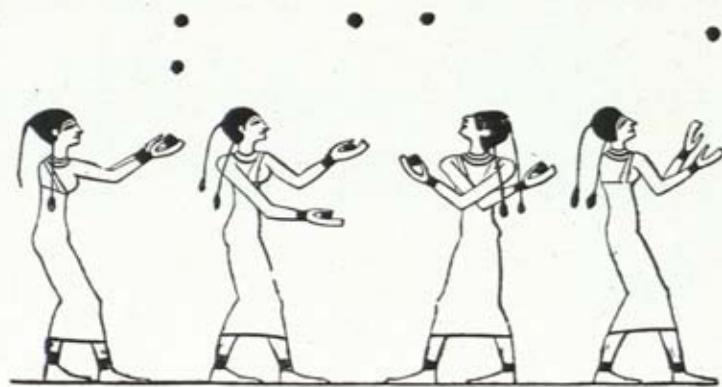
After Wilkinson, I. 136.]

FIG. 59.—On the left a man dances a solo to the clapping of hands. A troupe of dancers practising the piroette and dancing *à deux*.



After Wilkinson, I. 133.]

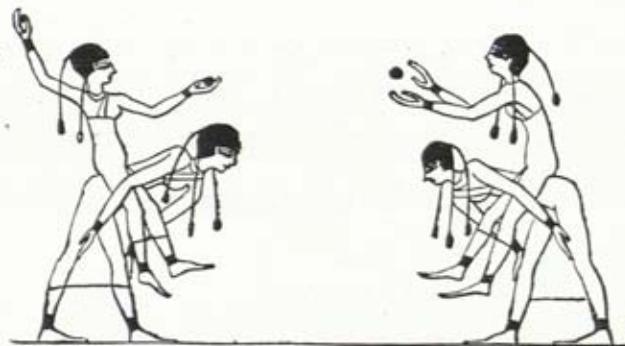
FIG. 60.—A Figure Dance.



After Wilkinson, i. 198.]

[*Beni-Hassan.*

FIG. 61.—Girls juggling with Balls, keeping several in the air and using both hands.



After Wilkinson, i. 198.]

[*Beni-Hassan.*

FIG. 62.—Ball Game in which the winners ride on the backs of the losing side.



After Wilkinson, i. 201.]

[*Beni-Hassan.*

FIG. 63.—Using the heel as a pivot and holding the body stiff, the men whirl the girls round and round.

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attacked it by entangling the creature in a running noose of rope. When it came to the surface to breathe it was speared by a harpoon



After Wilkinson, I. 210.]

[*Beni-Hassan.*

FIG. 64.—The “Favourite” and the “Broad Striker” engage in a contest of strength. The shepherds urge on the bulls with short sticks.

attached to a reel. The beast at once dived, the line ran out, and when it emerged again another harpoon was in readiness ; finally,



After Wilkinson, I. 219.]

[*Thebes.*

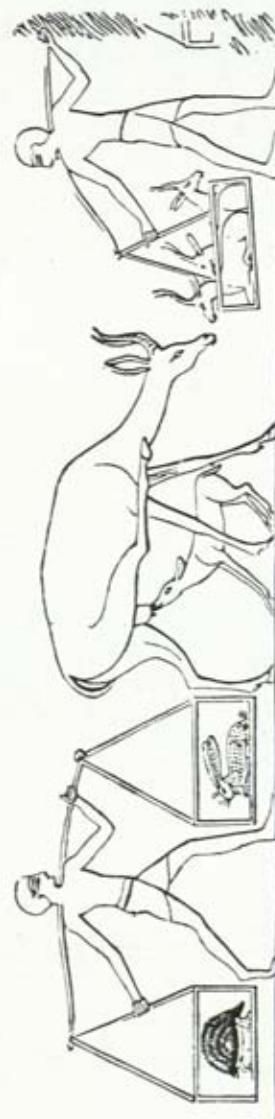
FIG. 65.—Huntsman returning home, carrying a captured Oryx and leading his Hounds.

when exhausted it was pulled within reach by the numerous ropes with which it was entangled, and then dispatched by the huntsmen. Occasionally, however, the hippopotamus was the victor,

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and furiously attacked and upset the boat. Farther afield, lions and leopards haunted the desert, and tempted the more enterprising hunter to display his prowess with the bow. Farther south still, the elephant and the giraffe were found. The lasso and the bolas were used extensively in hunting; and very frequently the animals were only captured and brought home, for the Egyptians loved all animals, and kept many different kinds as pets (Figs. 65 and 66). There were many varieties of dogs, and some, indeed, appear to be the ancestors of certain breeds fashionable at the present day. There is one kind with a long body and short bent legs, a prehistoric dachshund. The greyhound was used for coursing in the open plains. There was, too, a more powerful hound with a square muzzle, used for big game (Fig. 67). Lions also were trained for the chase, like the hunting cheetahs seen to-day in India. Small game and fowl were seized by cats well trained as retrievers. In fact, the Egyptians were expert trainers of animals; and even the monkeys were used to pick fruit from high trees, or to haul on ropes in some of the boats. In many representations on the monuments the favourite pets accompany their masters: the lion or the monkey sits under his chair, the baboon and the dogs walk out with him, and the cat sits on the prow of his boat.

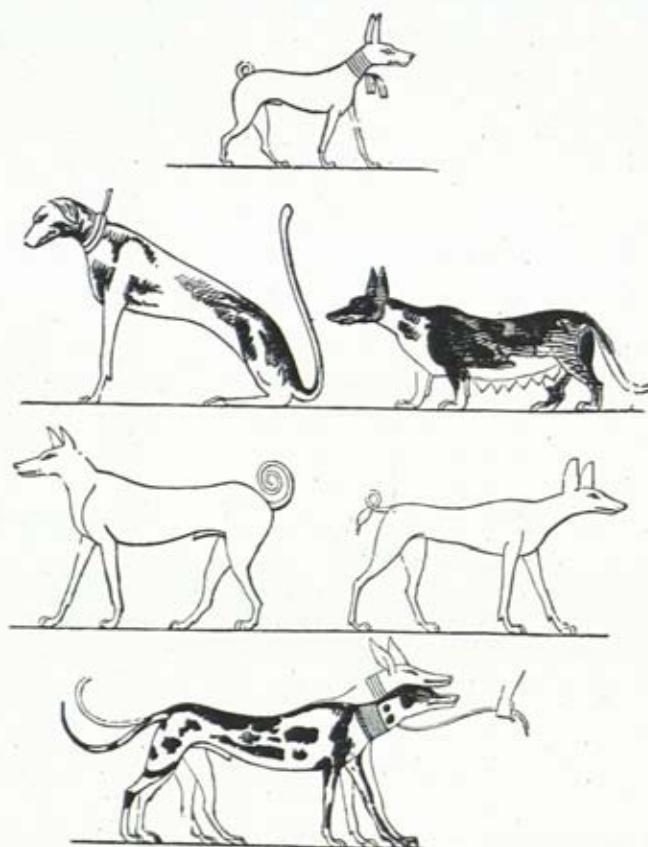
Private ponds in the gardens of the wealthy afforded excellent



After Wilkinson, I, 247.]
FIG. 66.—A Hare and a Porcupine being brought home in cages. A Tame Gazelle with Fawn.
Young Deer in a cage.

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line fishing. In the rivers and waters of the Delta, however, nets were used (Fig. 68); though with the sportsman a two-pronged spear was the favourite method. He stood on a papyrus punt and, watching the fish gliding through the water, dexterously

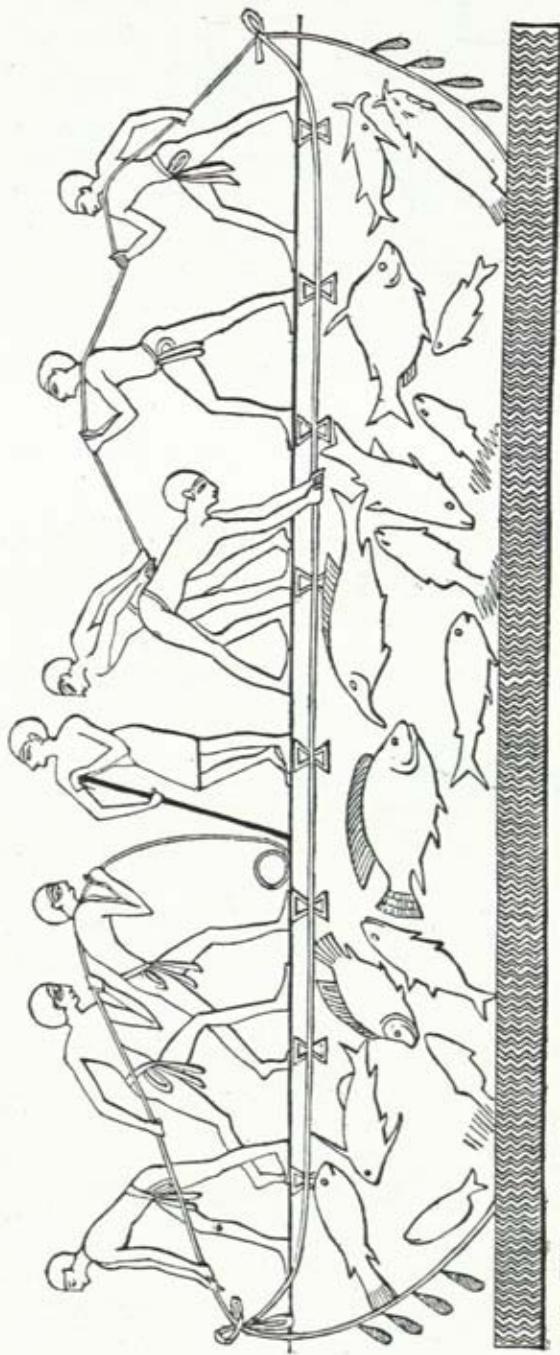


After Wilkinson, I. 230.]

FIG. 67.—Egyptian Dogs.

speared them, congratulating himself when he caught one on each prong (Fig. 69).

Wild fowl was common everywhere, and it was the custom for the entire family to go off in punts to the back waters (Fig. 69), or when the inundation was at its height, to amuse themselves with this sport. A heavy flat throw-stick slightly curved was used.



After Wilkinson, II, 1871

FIG. 68.—Fishers of the Delta hauling in a Drag-net. The Overseer, leaning on his staff, superintends the work.



After Wilkinson, i. 237.]

FIG. 69.

1. A family out hunting Wild Fowl in the backwaters or marshes. Among the papyrus plants an ichneumon is stealing a little bird from a nest.
2. Another party fishing. The father has skilfully caught two fish with his bident or two-pronged spear.

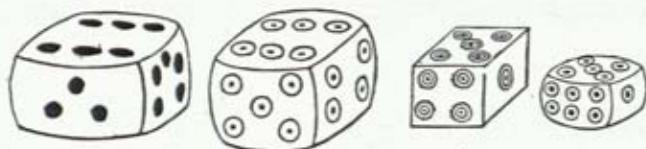


FIG. 70.—Dice.

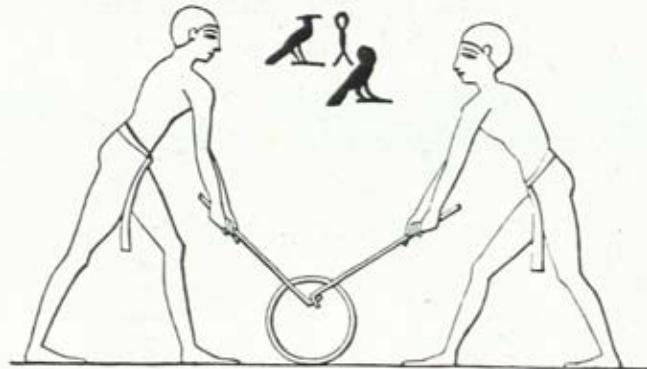


FIG. 71.—Playing Draughts.



After Wilkinson, i. 190, 195.]

FIG. 72.—Playing Mora, and Odd and Even.



[*Beni-Hassan.*

FIG. 73.—Game with a Hoop.



[*Beni-Hassan.*

FIG. 74.—Other Games.

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The punt was not complete without the favourite cat to retrieve the game, and often a decoy bird was taken as well (Fig. 76A);

and in the evening they returned from the picnic full of joy, laden with fish and wild fowl for the table, the children carrying lotuses and garlands of lovely flowers.

But there were also indoor games and amusements (Figs. 70-74). Draughts was always a favourite, alike with prince and peasant. The men were of ivory or wood, and were variously shaped: some had little human heads, others were like nine-pins.

The children played with dolls (Fig. 75), and were transported with

joy when dolly had real hair, and could move its hands and legs. A pleasurable fear, too, was excited by the horrid crocodile (Fig. 76) that moved its jaws up and down with a slow crunching

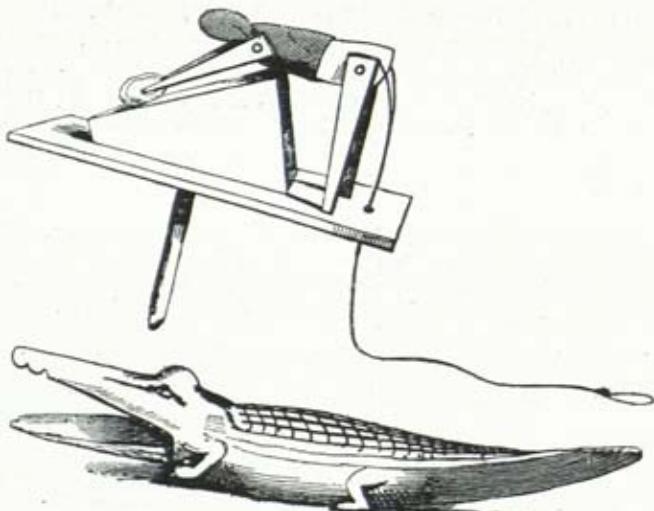


FIG. 75.—Wooden Dolls.

[British Museum.]



After Wilkinson.]



After Wilkinson.]

FIG. 76.—The Horrid Crocodile.
62

[Leyden Museum.]

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movement. Many were the funny toys that delighted the hearts of the little girls and boys thousands of years ago ; by pulling a string, wooden figures kneaded dough (Fig. 76), or did the washing, or merely jumped about and pulled faces, thus exciting the merry laughter of the little folks.



[British Museum.]

FIG. 76A.—Fowling in the Marshes. A cat retrieves a bird.

Childhood only lasted for four years, then the child ceased to be a "wise little one" and went to school ; but "cakes and sweet-meats for the children" figure so constantly in the accounts, as to lead to the conclusion that they were as much beloved and spoiled in the Nile Valley as everywhere else in the world.

CHAPTER V

ARCHITECTURE—PYRAMIDS AND TEMPLES

“ There they build of red granite,
They build a pyramid fair in workmanship :
The masons are as gods ! ”

—*Song of the Harper* (Spensly's trans.).

THE most ancient architecture in the world is found on the edge of the vast solitude of the desert ; there, on a plateau of rock, stands the Great Pyramid, a monument not only the most majestic, but also the most perfectly constructed, that man has ever achieved.

In all its glorious perfection, it was seen by Abd-el-Latif in the thirteenth century, its polished white stone-casing flashing in the sunlight, and vindicating the name of “ The Light ” given to it by the Egyptians (Fig. 78). Evil days were at hand, and spoilers fell upon it and used it as a quarry for the growing city of Cairo. The brilliant limestone casing was torn off, and out of it a mosque was built. The rubbish left from this act of destruction has since been used for the roads.

More has been written about the pyramids than about any other monument of antiquity. The theories are as numerous as the books. Most of them are based upon measurements, and as no two authors gave the same, the theories were contradictory and improbable. Howard Vyse and Piazzi Smyth will be remembered as having tried to reduce the chaos by undertaking a scientific measurement. Their excellent work was supplemented later by Professor Flinders Petrie. The results of his investigations, on mathematical and mechanical lines, are well known to the public, but no one except an engineer or an architect will be able to appreciate the difficult work of accurate triangulation of the pyramid area, and the complicated measurements of the Great

Architecture—Pyramids and Temples

Pyramid itself. When these are once realized, the vast design and consummate skill of the ancient architect can be, to some degree, understood. Until the real purpose and object of this design be disclosed, people will continue to exercise their ingenuity by proposing theories. To keep these within the limits of probability, the measurements of some of the more important portions are given.

It is 756 feet square, and occupies $13\frac{1}{2}$ acres. The height is 451 feet now, but originally it was 481 feet. This is taller than any other structure in the world, with the exception of two or three modern towers. It is oriented to the cardinal points of the horizon, but there is now a divergence of 4' West of North. This deviation may be either a mistake on the part of the architect or the Pole has changed. Astronomers state that there is a variation of position of the Pole, amounting to about 1' per 1000 years, so the conclusion is justified that the orientation was accurate for the epoch in which the pyramid was built. The entrance is about 55 feet above the original pavement in the nineteenth course of the north face, but it is not in the centre, being about 24 feet East of the mid-point. A movable stone, working on a pivot, constituted the doorway (Fig. 80). When

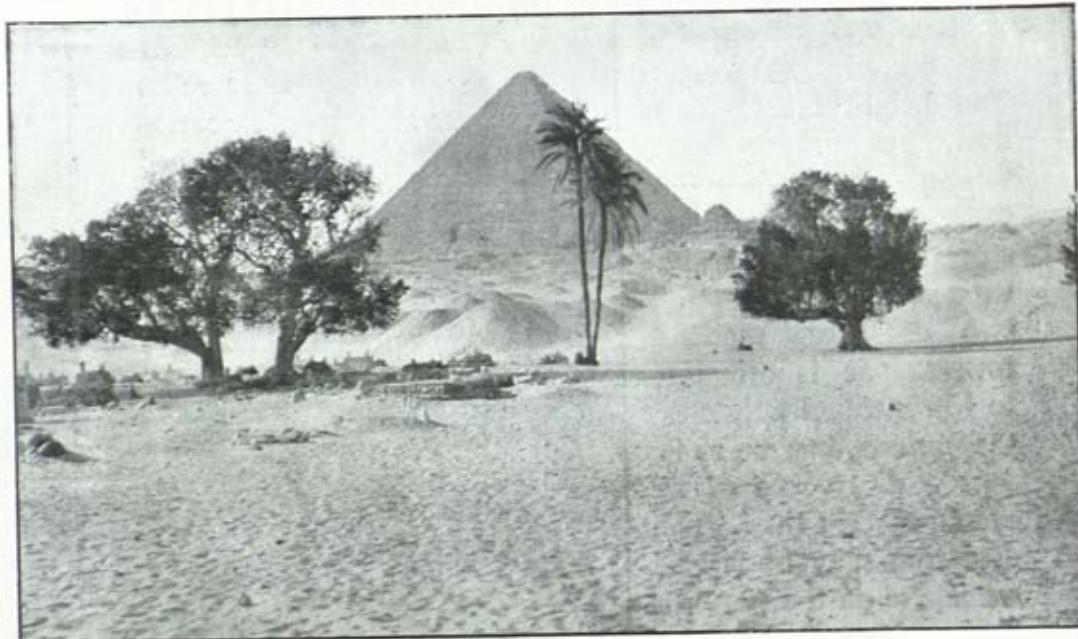


[Royal Scottish Museum.]

FIG. 77.—Black Diorite Statue of Khafra, IVth Dynasty, 4685-4619 B.C. The builder of the Second Pyramid at Gizeh.

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closed, there was nothing to distinguish the stone from the rest of the casing. The secret was known to the Romans,¹ but afterwards was apparently lost ; so perfectly was it concealed, that once lost it was impossible to discover it. In the ninth century of our era the Khalif al Mamun, excited by the legends of the vast treasure, determined to force an entrance. He selected the centre of the north side, near the base, and, of course, missed the pivot doorway. Not discouraged, he excavated the solid masonry for



E. Wedgwood.]

FIG. 78.—“The Light,” built by Khufu, about 4748 B.C., called by us “the Great Pyramid.”

many months² without result, when suddenly the workmen heard “a great stone fall into a hollow space.” They altered their direction, and so broke into the main passage ; but the fallen

¹ Strabo says, “ It has on its side, at a moderate elevation, a stone which can be moved (taken out). When it has been lifted up, a sloping passage is seen,” etc.

² Some idea of the *mass* of the pyramid may be gained from the Arab tale (quoted by Piazzi Smyth) of the old king who calculated that all the wealth in Egypt in his time would not enable him to destroy the pyramid. But then, it contains 89,000,000 cubic feet of stone ! The fact, too, that Howard Vyse spent £10,000 on excavations merely in order to measure it, gives some idea of the magnitude of the task.

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stone disclosed to their astonished eyes an upward passage that had been completely hidden. But it also showed that this ascending passage was plugged with immense granite blocks. To attempt to quarry through these was useless, so the Arabs burrowed through the softer limestone of the core masonry, keeping alongside the blocks until, reaching beyond the last one, the passage way was clear. The masonry they destroyed left a huge chasm at the junction of the ascending with the entrance passage; it is still called Mamun's Hole, and is the way of ingress to the upper portion.

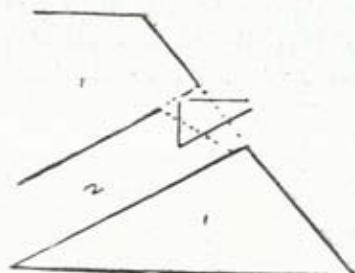


FIG. 80.

1. Body of pyramid.
2. Entrance passage showing pivot stone.

floor is a square shaft which descends vertically into the rock; its purpose is unknown. From this chamber of chaos another

¹ The angle is $26^{\circ} 29'$.



Men-kau-ra (4619-4556 B.C.),
the builder of the Third
Pyramid at Gizeh.



{British Museum.
Khufu (4748-4685 B.C.),
the builder of the Great
Pyramid at Gizeh.

FIG. 79.

The main passage descends from the entrance,¹ going straight through the masonry and through the solid rock for more than 300 feet, then there is a horizontal passage terminating in a subterranean vault just south of the central axis. This room has not been finished, the floor not having been fully excavated out of the rock, which nearly fills it in irregular masses, rising to within 10 inches of the roof. In the

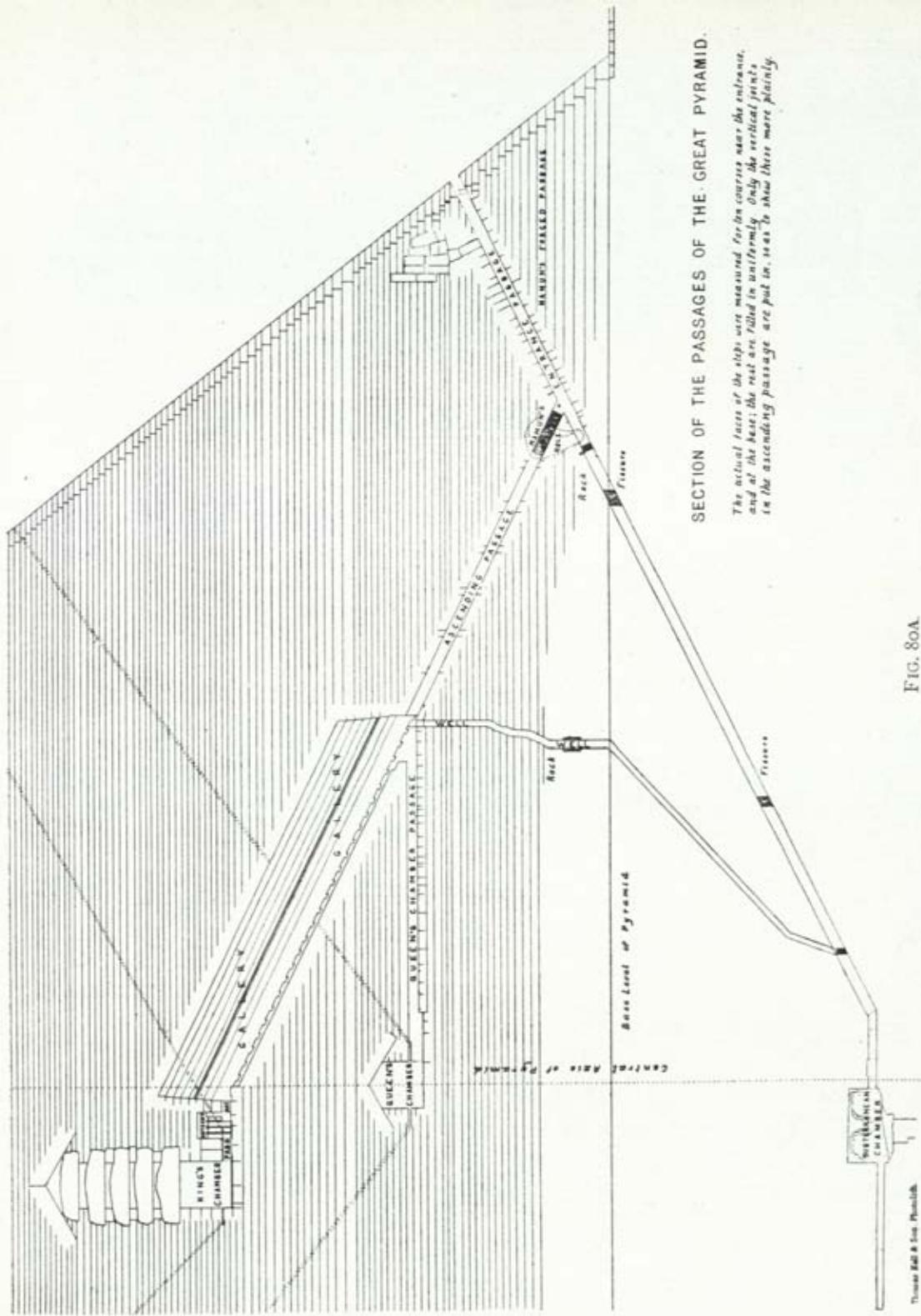
The Civilization of the Ancient Egyptians

passage leads southward to "nothingness." Turning back we finally reach the junction with the ascending passage, about 15 feet of which is blocked with granite; the plugs taper slightly, so that they fit the passage, which narrows at that point. The passage slopes up and is inconveniently low, it then arrives at a level landing-place. Here, towards the West, is the head of the shaft leading to the subterranean chambers. It has obviously been cut in the masonry after the pyramid core was built; the first part of the shaft bears evidence of this. The remainder is quarried through the rock, and is precipitous and tortuous. From the landing-place the passage branches into two parts; one, horizontal, leads to the Queen's Chamber, the other, ascending still, becomes the Gallery.

The Queen's Chamber is of granite and has a sloping roof, the ridge of which is exactly in the plane of the central axis of the pyramid. There is a niche in the eastern wall; an old tradition states that an "idol" stood there. Within the chamber nothing now remains, but Edrisi, who wrote in 1236, says that it contained an "empty vessel"—a sarcophagus; and there is no reason to doubt his statement.¹

The Grand Gallery of polished limestone is a most remarkable structure; still sloping upwards it is now lofty, and has on each side a raised platform or bench about 20 inches wide and not quite 2 feet high. These platforms or "ramps" have holes drilled in them, twenty-eight altogether, on each side, alternately long and short; no one knows their purpose. Equally inexplicable is the groove in the wall above each ramp hole. The ceiling of this corridor is amazingly ingenious. The upper part of the walls is built in 7 laps of stone, each projecting over the one below, thus overhanging the ramps and lessening the width of the gallery until finally the roof equals the floor space between the ramps. Each of the 36 roof stones is so arranged that its weight is borne by the side walls, so that there is no cumulative pressure which would cause the whole roof to slide down the incline. There is a remarkable groove running the entire length

¹ Greaves mentions this in 1638.



From Flinders Petrie's *The Pyramids and Temples of Gizeh*, by kind permission.]

SECTION OF THE PASSAGES OF THE GREAT PYRAMID.

The actual faces of the stonework were measured for the courses near the entrance, and at the base; the rest are filled in water-tight. Only the vertical joints in the ascending passage are put in, so as to show them more plainly.

FIG. 80A.

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of the wall of the corridor in the third lap. The meaning of it is not known. Another point of interest is that the central axis of the pyramid passes through the south end of the Grand Gallery, marking the transit from the North to the South when the great stone block at the end is overpassed, and the passage to the antechamber is reached. This stone block, which has been variously called a "step," a "dais," and a "throne" (it may just as well have been an altar as a step!), is rather more than 5 feet long and not quite 3 feet high. The Grand Gallery is almost closed at this end by the southern wall, which comes down to within 42 inches of the block. Passing over this, a horizontal passage is reached, low and short. Near the middle it opens out into what has been called the Antechamber—and here again is a peculiarity not understood; this is the extraordinary arrangement of grooves in the walls. Right across this room is a strange obstacle, a granite portcullis, the edges of which rest in grooves in the wainscot of the walls; it hangs in mid-air, a space being left above and below it. There are three other grooves, but no further barriers; and, in addition, on the south wall are four vertical grooves.

Finally, the King's Chamber is reached. This splendid hall is of polished granite; it contains nothing but a plain red granite sarcophagus. The whole apartment has been injured by an earthquake, so that the joints between the stones have separated and the roof beams are fractured. Two air channels lead into it, but the desert sand is always blocking them up. It was in one of these that Howard Vyse found the fragment of sheet-iron. Doubt has been cast upon the genuine antiquity of this; but as there is a cast of a nummulite on the rusty part where it was embedded in the nummulitic limestone masonry, there can be no doubt of its extreme antiquity. The room is rather more than 34 feet long, 17 feet wide, and 19 feet high, and has a flat roof. The coffer, which is 7 feet 6 inches long, has an undercut groove to hold the edge of the lid, the pin-holes to attach it are there too, but no lid remains.

Just under the roof of the eastern wall of the Grand Gallery is a small passage; this leads to the space above the King's Chamber.

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Five of these "construction chambers" have been discovered, one over the other. The work is rough, and there are many masons' marks on the stones. To the upper four no way of entrance was found, but Howard Vyse cut a shaft upwards from the first. The purpose of these chambers is to minimize somewhat the immense weight of the superincumbent mass of masonry, which would otherwise press on the roof of the King's Chamber. There is no real significance in the naming of these apartments; the Arab custom is for a man's tomb to have a flat top, and for a woman's



E. Wedgwood.]

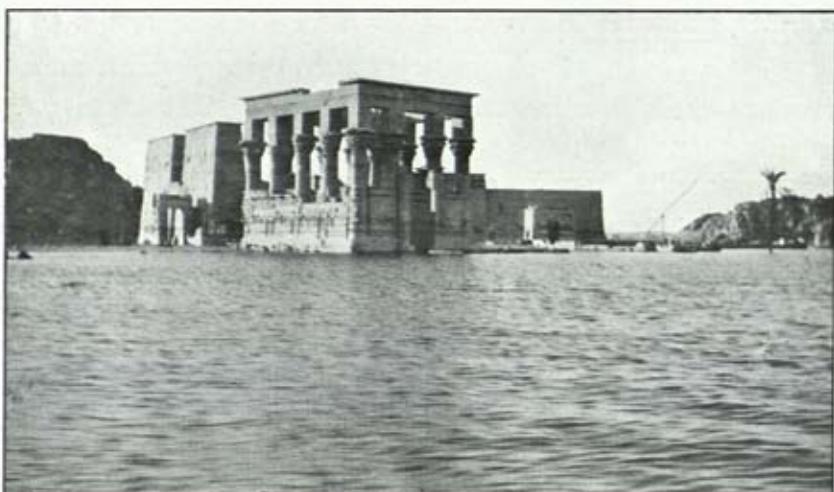
FIG. 81.—Ramesseum at Thebes. Main building looking east.

to have a gable roof. Noticing these peculiarities, the Arabs called them the King's and the Queen's Chambers respectively.

The workmanship is extraordinary in a structure of such immensity! The exquisite accuracy and trueness of the squaring of the casing-stones is a marvel, and, to quote Professor Petrie, "equals the finest optician's work on a scale of acres instead of feet." Many of the stones weigh about 16 tons; and not only are these fitted against each other with marvellous perfection, but between each there is a layer of cement so thin and gossamer-like that the join is invisible. An impossibility, and yet it was accomplished! The entrance passage and the Queen's Chamber

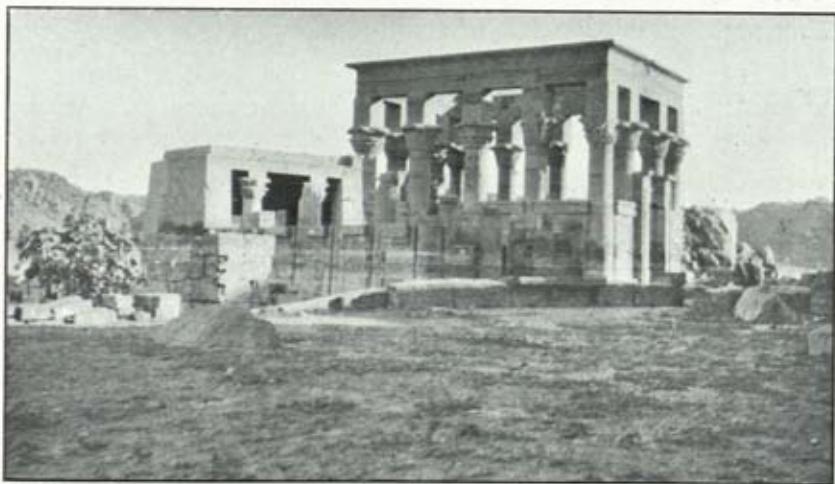
Architecture—Pyramids and Temples

show the same brilliant constructive powers. Higher up, although the masons' work is as good, the construction is altogether out of



E. Wedgwood.]

FIG. 82.—Temple of Isis and what is popularly called Pharaoh's Bed, on the Isle of Philae, during the Inundation.



E. Wedgwood.]

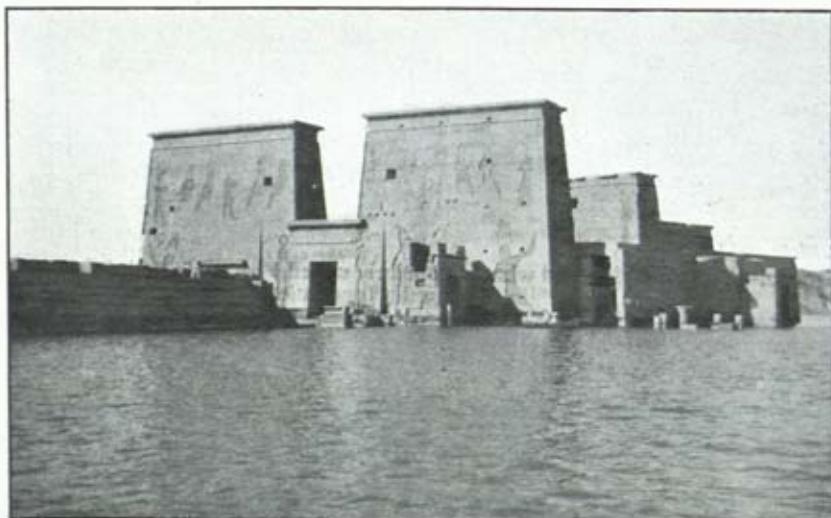
FIG. 83.—The same—water low.

level. How much of this is due to the action of earthquakes? Again, the granite blocks in the Antechamber have never been dressed flat, and in several parts of the upper building the knobs for lifting

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the stones have never been removed ; it was the custom to knock them off when the stone was *in situ*, and grind and polish the place equal to the rest of the surface. These flaws could not have been caused by earthquake ! Carelessness, haste, and lack of supervision are suggested. Perhaps Professor Petrie is right, and these unfortunate changes were due to the death of the architect who had at first planned and directed the magnificent work.

It is impossible here to enter upon the various theories about the dimensions of the pyramid. Many, indeed most of them,



E. Wedgwood.]

FIG. 84.—Pylons, Temple of Isis, Philæ—water high.

are quite wild, and are based on ignorance. To judge any of them, the most accurate mathematical measurements must be considered. Bearing this in mind, the valid conclusion, supported by facts, is, that the building was set out to a measure of an even number of square cubits—the Egyptian cubit of 20.632 inches.

The elevation was a rise of 14 on a base of 11 (Fig. 85) ; this angle of construction is such, that the height is the radius of a circle equal to the circuit of the base. By this it is seen that certain geometrical truths were illustrated in the proportions of

Architecture—Pyramids and Temples

this colossal structure : (1) the π ratio,¹ expressing the relation between the diameter and circumference of a circle ; (2) the relation between the side and hypotenuse of a right-angled triangle.

Definite astronomical knowledge seems to have been expressed in certain of the dimensions : the distance of the earth from the sun ; the circumference of the earth ; its orbit round the sun and round its own axis. Then, again, the pyramid angle² of nearly 52° causes it to become an integral part of the contents of the earth. Its latitude is 30° and the entrance tunnel was oriented due North,³ but the idea that it pointed to α Draconis must be given up, as it is quite inconsistent with the probable date of erection.

Geometrical and astronomical knowledge is undoubtedly expressed ; but was this the sole purpose of this majestic and

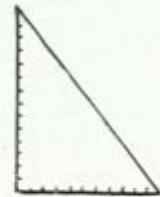
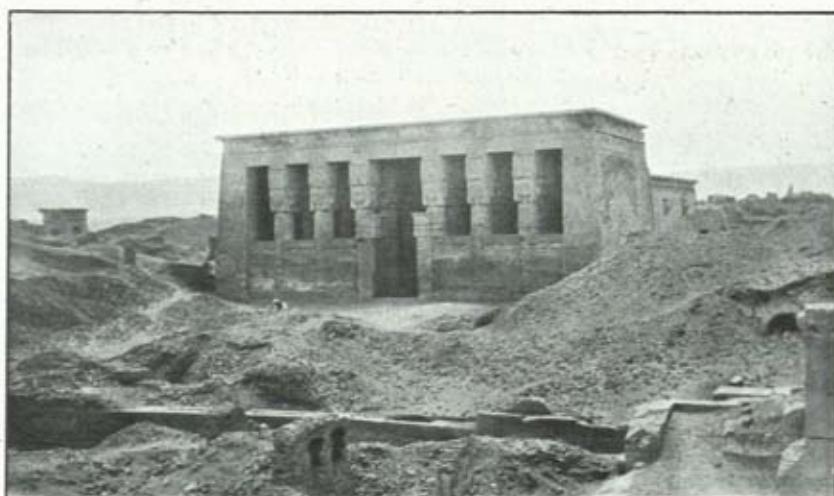


FIG. 85.—Pyramid angle, and elevation of a rise of 14 on base of 11.



E. Wedgwood.]

FIG. 86.—Temple at Denderah.

sublime monument, with its intricate passages and concealed chambers ?

Those who are familiar with the Egyptian Scriptures will feel inclined to agree with Marsham Adams, who traced a marvellous

¹ $3\cdot14156$.

² $51^{\circ} 53' 20''$.

³ Now 4' West of North.

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correspondence between this pyramid "The Light" and the book of the "Coming Forth by Day." The analogy is certainly remarkable. It was the custom for the Egyptians to cover the



Lepsius, *Denkmäler.*

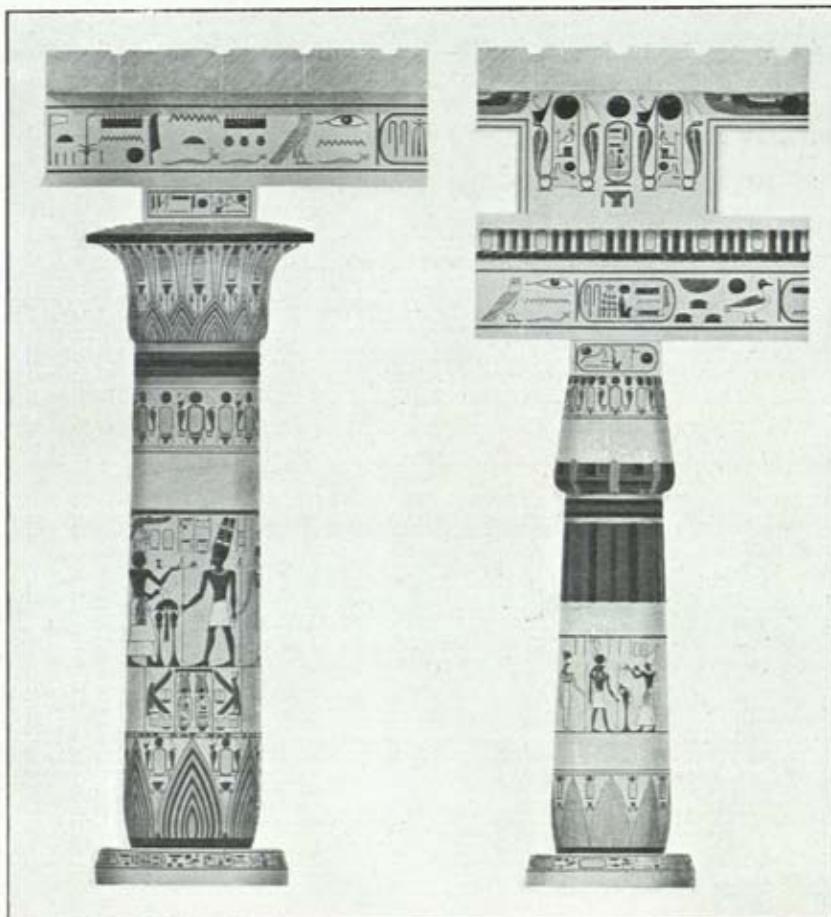
[*Abu Simbel.*]

FIG. 87.—View inside the immense Rock Temple to Amen, excavated by Rameses II., 1300-1234 B.C.

inside of their tombs with pictures from this wonderful book, so it is quite possible that the great king who built the pyramid, not being content with pictures, should make his tomb itself an architectural illustration of the doctrine of the Light and the hidden Mysteries.

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All are agreed that Khufu¹ was the builder (Fig. 79). He was the second king of the IVth Dynasty, and lived approximately 4700 B.C. In spite of the testimony of all historians an element of



Lepsius, *Denkmäler*.]

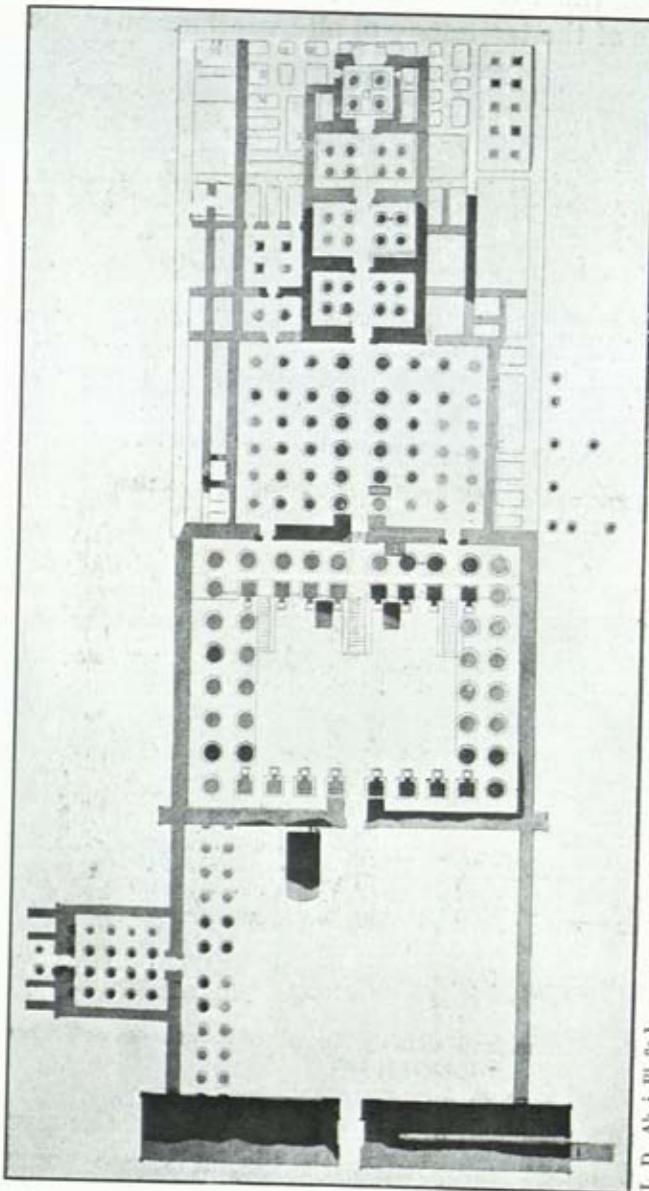
FIG. 88.—Two Columns from the Hall of the Temple of Rameses II. at Thebes,
1300–1234 B.C.

doubt exists, because on the blocks of stone inside the pyramid another name is found coupled with his, a name somewhat similar, Khnum-Khuf, and it is found even in the most hidden spots. Now either this king had two names extraordinarily alike, or

¹ Greek Cheops.

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they were two separate people; and the latter is perhaps the more



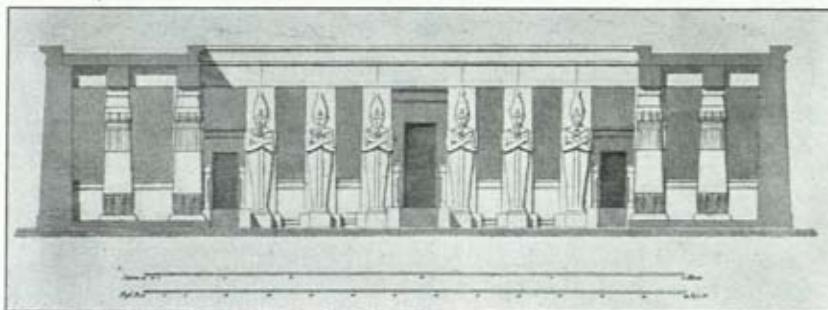
L. D., Ab. i. Bl. 80.]

FIG. 89.—Ground plan of the Temple of Rameses II. at Thebes. First the pylons, with staircase leading up to the top, then through the great gates into the Court. From this, on the left, opens a small temple. Passing straight across the Court, another gate admits to the Hypostyle Hall. Beyond this again the great Hall of Pillars, then several shrines, and finally the Sanctuary. The Avenue is continuous from the great Temple Gates straight into the Sanctuary, so that at a definite hour on a certain day the sun sends a shaft of sunlight which strikes on the wall of the Sanctuary, thus enabling accurate observations to be made.

probable. Khnum-Khuf in that case was the most important, as his name precedes the other; and apparently he died first, as

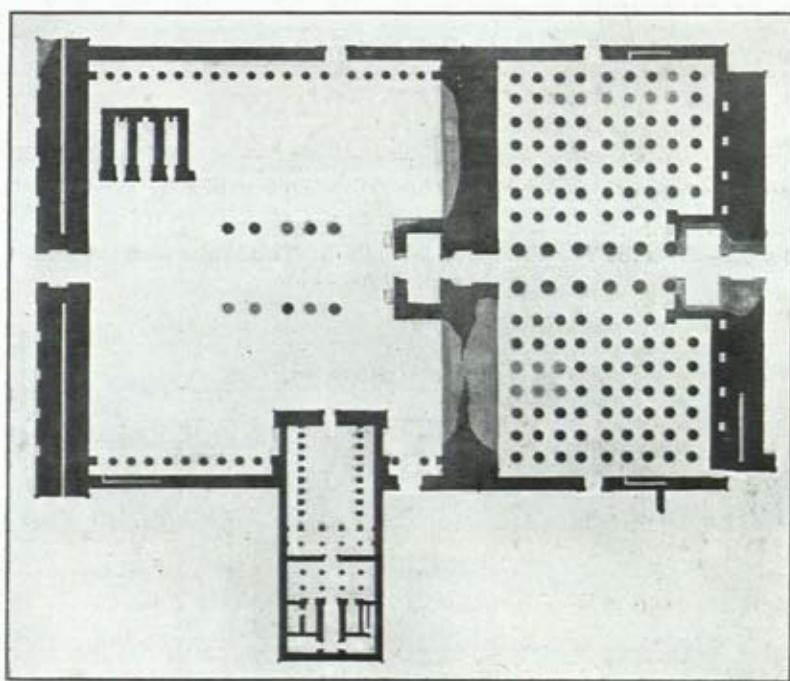
Architecture—Pyramids and Temples

Khufu's name occurs alone with great frequency. Did they act conjointly in this vast enterprise? Some authorities think so.



L. D., Ab. I. Bl. 88.]

FIG. 90.—Cross-section of the Temple of Rameses II. at Thebes, 1300-1234 B.C.

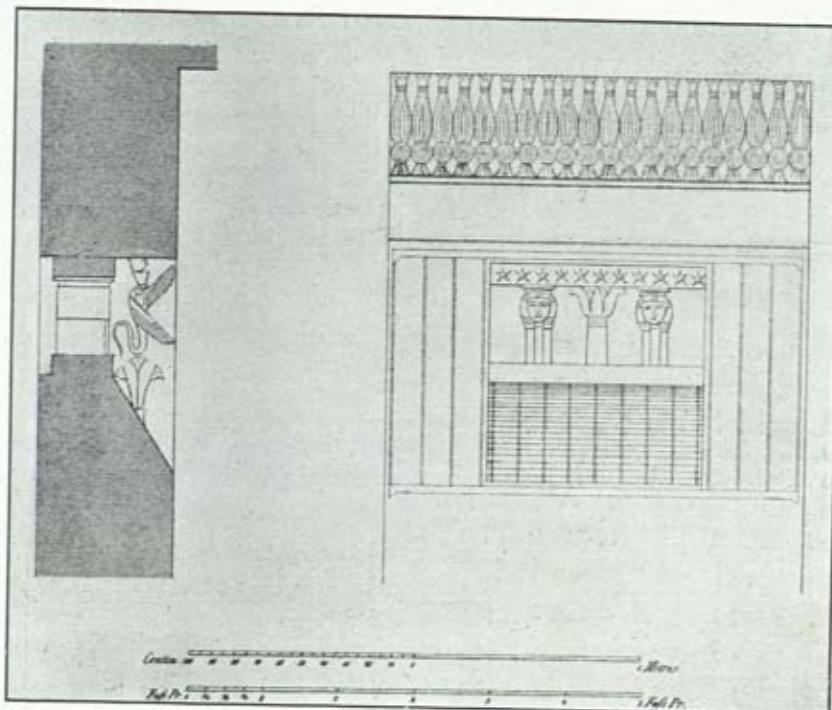


L. D., Ab. i. Bl. 86.]

FIG. 91.—Ground plan of the Temple of Seti I. at Thebes, 1326-1300 B.C.

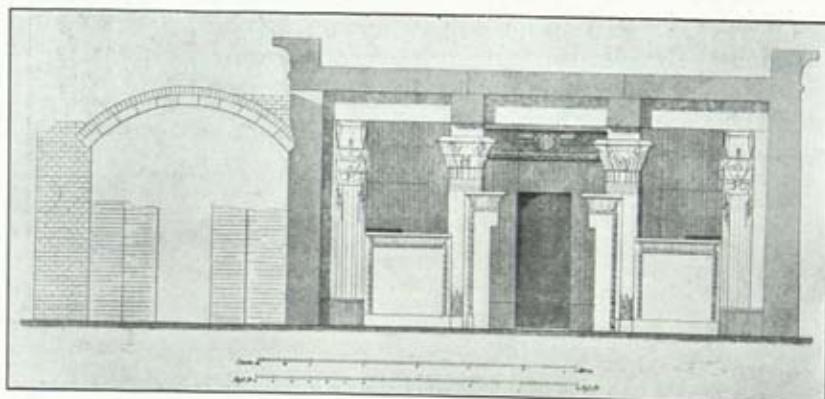
But it seems more probable that one built and the other repaired, or perhaps finished the structure. There is one little point that

The Civilization of the Ancient Egyptians



L. D., Ab. i. Bl. 88.]

FIG. 92.—From the Temple at Dér-el-Medinet. This shows what the windows of the temples were like.

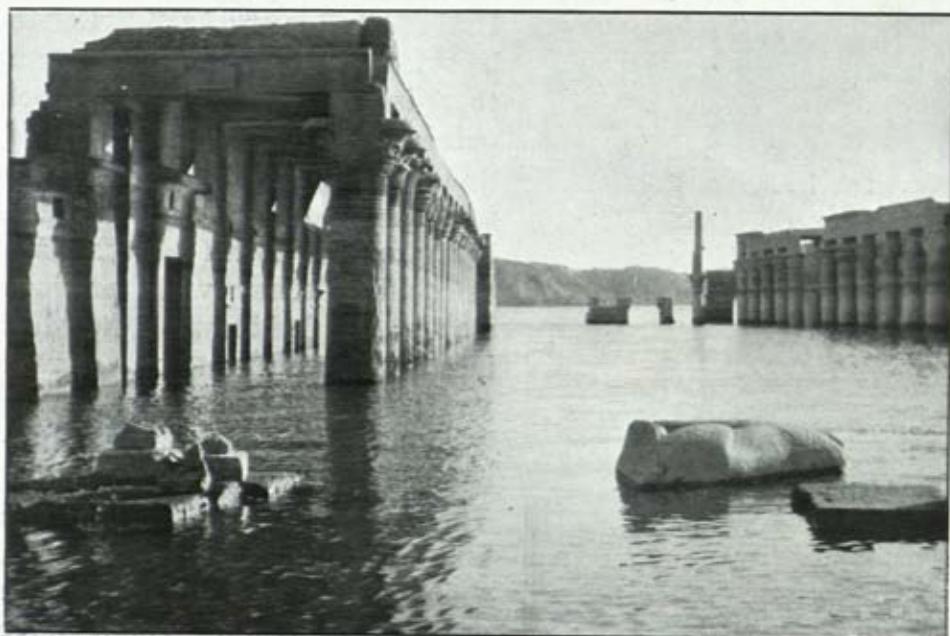


L. D., Ab. i. Bl. 88.]

FIG. 93.—Section of the Temple at Dér-el-Medinet.

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possibly confirms this idea. In the King's Chamber the roof beams are fractured by an earthquake. The crack in one roof beam is plastered over! This must therefore have been done *afterwards*, unless, indeed, the builders put in a cracked stone, which is not at all probable. In such a case, if Khnum-Khuf built, Khufu may have repaired (or *vice versa*) and carried out those structural alterations which have been assigned to a change of plan, such as



E. Wedgwood.]

FIG. 94.—Colonnade looking South from the Temple of Isis, the Nile rising.

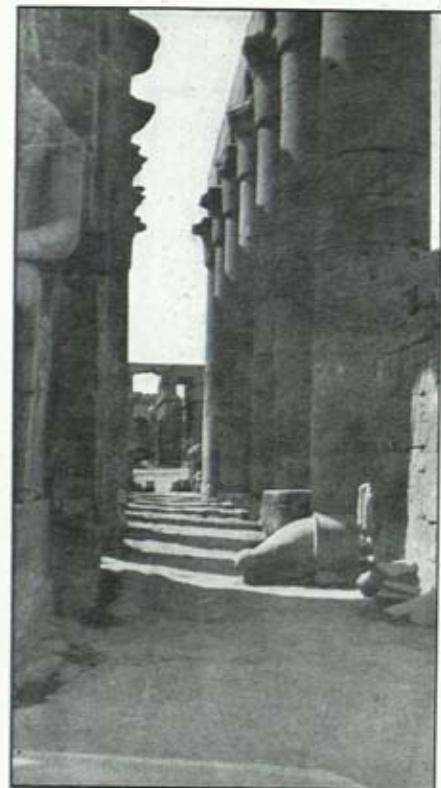
the excavation of the well-shaft through the masonry. There is no evidence of the existence of a King Khnum-Khuf except in connection with this pyramid.

Was the pyramid a tomb or was it not? A masonic representation of astronomical and mathematical knowledge it certainly was; an architectural allegory, illustrating the book of the "Coming Forth by Day" it may have been, but these uses do not preclude that it was also the sepulchre of the king who built it—the other pyramids undoubtedly fulfilled that function.

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The Egyptians are silent on the subject themselves. The classical authors differ; Diodorus says that Khufu was buried in a secret place to escape the animosity of the multitude. Herodotus implies that the Great Pyramid *was* his tomb, but says that it was subterranean, on an island with a moat round it communicating with the Nile; but both agree that the building was destined for sepulchral purposes.

Is the testimony of every Arab writer to be set at naught? Among them there is a remarkable consensus of opinion that Khalif al Mamun *did* find a very marvellous treasure therein: "A stone trough in which lay a stone man with a breastplate of gold adorned with precious stones; beside him was a sword of inestimable value and an emerald vase; on his head a carbuncle brilliant as the sun, having characters which no man can read." This story is well within the bounds of possibility, a stone case, shaped like and enclosing the mummy of Khufu, could have been conveyed to the King's Chamber and deposited in the sarcophagus as its last resting-place.



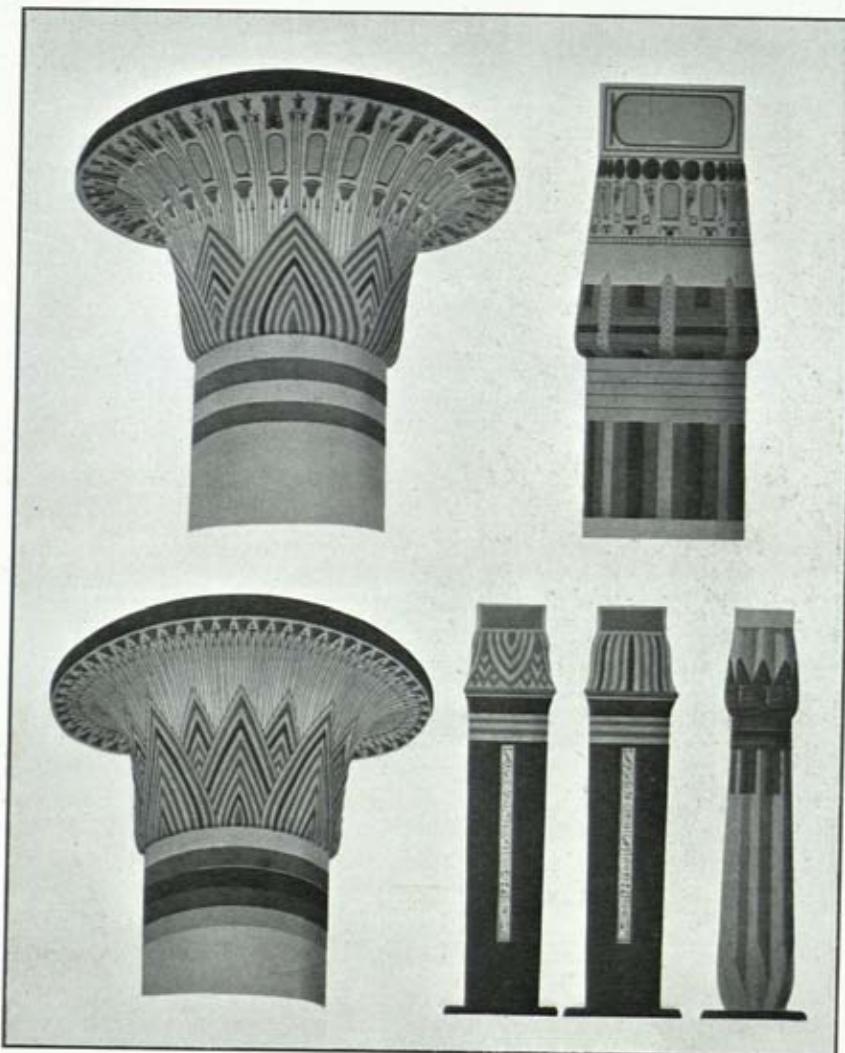
E. Wedgwood.]

FIG. 95.—Vista of Pillars, Karnak.

The architecture of the temples displays the same features as the pyramids: dignity, grandeur and simplicity. Like them, too; astronomy and mathematics governed the plans and construction of the buildings, which were on the principle of the square, and were definitely oriented. A piece of ground having been selected as the site, there was held the religious ceremony of "the stretching of the cord" to fix the axis and the orientation,

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and to set out the plan in a workmanlike manner. The “priest” “read the sacred text during the laying of the foundation-stone,”



L. D., Ab. i. Bl. 81.]

FIG. 96.—Three Pillars, one being fluted, and Three Capitals all exquisitely coloured, from the large Pillar Hall of the Temple at Karnak.

and “during the fixing of the four corners with accuracy by the four supports of heaven.”

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The temple was approached by a broad paved causeway,



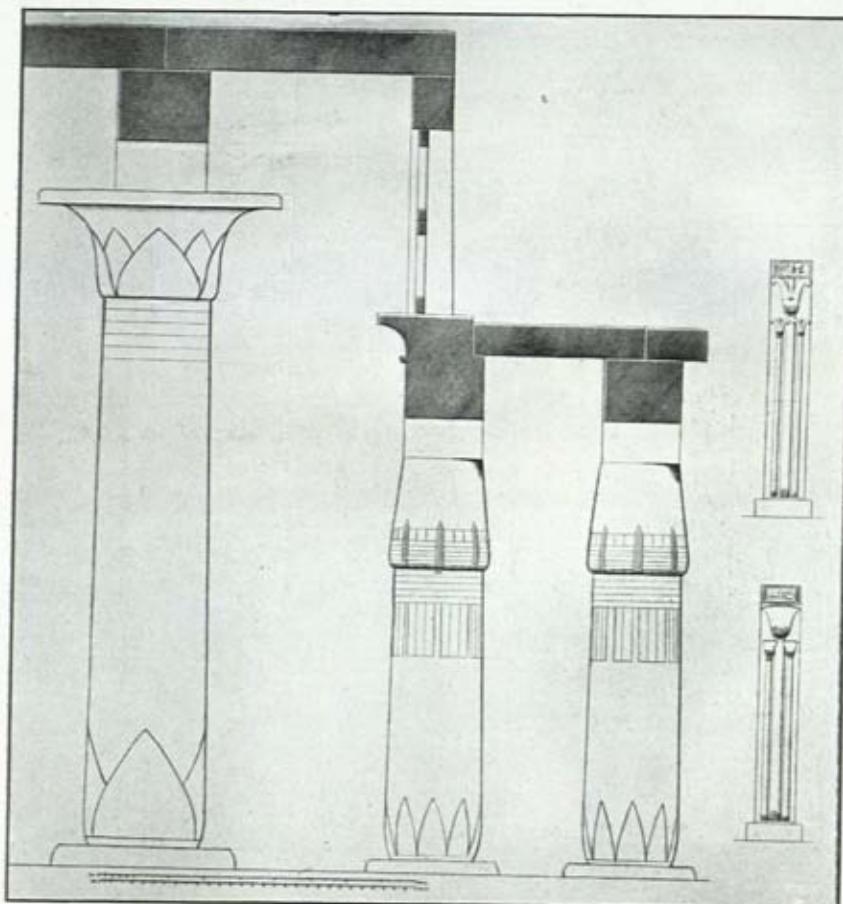
L. D., Ab. I. Bl. 108.]

FIG. 97.—Capitals from the Temple at Philæ.

flanked on each side by sphinxes forming an avenue. Then frequently came several tall and graceful flagstaffs and two noble

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obelisks fronting the entrance ; the great feature of this were the pylons, massive towers flanking it on each side (Fig. 84). Passing through the gates a large court was reached, surrounded by many pillars, then across the court another gateway leading



L. D., Bd. ii. Ab. i. Bl. 77.]

FIG. 98.—Section of the great Pillar Hall at Karnak, showing Columns.

into the hypostyle hall. This was generally very large, the lofty roof being supported by beautiful columns ; behind this was the Sanctuary, which might be entered only by the priests, “ he who enters here must purify himself four times.”

Outside everything was brilliant with sunlight, the gay flagstaffs,

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the polished obelisks and colossal statues, the decorative scenes on the pylons. Crowds thronged the court and the hypostyle



L. D., Bd. ii. Ab. 1. Bl. 77.]

[*Karnak*.]

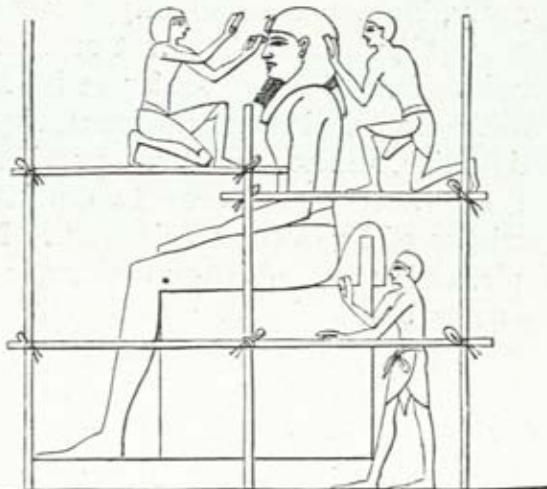
FIG. 99.—Great Hall in the Temple at Karnak.

hall on holidays; games and bull-fights took place in the avenue; everything made for gaiety. Inside it was totally different: silence

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and a cool twilight pervaded all, in the recesses the gloom and the stillness deepened, and in the hidden sanctuary profound peace and darkness reigned.

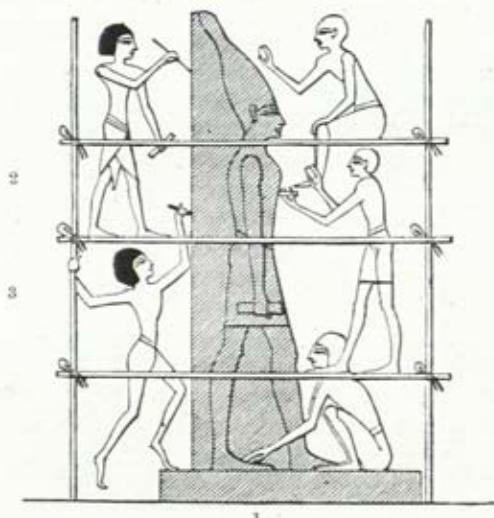
The earliest pillars of Egypt were fluted, with a base, and a simple abacus as a capital; the Greeks borrowed their Doric shaft from this order. Later the length was increased, and the capital was ornamented, generally in the form of



After Wilkinson, ii. 314.]

[*Thebes*.]

FIG. 100.—Colossal Granite Statue, surrounded by a light scaffolding for the convenience of the men who are polishing it.



After Wilkinson, ii. 314.]

[*Thebes*.]

FIG. 101.—Colossal Statue of a King. 4 and 6 are polishing; 5 is putting the finishing touches to the sculpture; 3 is engraving the hieroglyphics on the back; 2 is painting the hieroglyphics already engraved.

a lotus bud, papyrus or palm; for here, as everywhere, the love of flowers and of nature influenced the art. There were seven or eight orders of pillars; they were generally built of half drums, each layer so placed that the joints were at right angles to the one below.

The varieties of capitals were endless, and the orders were frequently combined into new forms, showing fertility of imagination and decorative skill. It may be asked whether the arch was used? The earliest true arch found so far, belongs to the VIth

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Dynasty, but apparently the Egyptians did not make use of it for ornamental purposes. The vast and level landscape needed mass to relieve it, and yet to conform with nature ; hence the massiveness of the pyramids and the immensity of the temple areas ; the straight line, and not the curve, provided also the natural outline, and for that reason these two points became the chief characteristics of Egyptian architecture. Majestic, solid, severe and simple, and yet of noble proportions, it reached a perfection that has never been eclipsed.

CHAPTER VI

SCULPTURE AND PAINTING

"Two statues . . . of marble and alabaster, I made them like life."

"The artist, wise in his art."

APART from the gigantic statues, which were architectural, the sculpture, peculiarly perfect, deserves the highest praise.

The statues of Ra-hotep and Nefert (Fig. 102) are masterly productions. The expression of these two famous people is life-like; the alert look of Ra-hotep and the smiling and yet commanding aspect of the princess are extraordinarily clever. There are many works of art extant; the sitting Scribe in the Louvre (Fig. 103) shows vigour of treatment, and there are several equally notable in Gizeh, of which the Sheikh-el-Beled (Fig. 105) is perhaps the most famous. It is very ancient, perhaps as old as the Great Pyramid, and is of wood, representing to the life a short elderly man walking forward, leaning on a staff. The eyes are made of black and white enamel with a peg of silver in the centre, this catches the light, and makes the eyes sparkle as if alive.

No nation has excelled the Egyptians in realistic portrait statues; the pride and haughty amiability of the noble, the waiting indecision of the secretary, the energy and capacity of the master workman, and the indifference of the tired peasant are all expressed with a fidelity to nature, which desired to give in the statue the traits of character shown in the model.

The statues were painted, even when made of valuable stone like alabaster or diorite; and the sculptors showed great facility in cutting and polishing even the hardest kinds, porphyry, granite and diorite being very commonly used. No doubt the hieroglyphic

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writing contributed to their facility in drawing, for in line-drawing they are unrivalled; the vigour and life expressed in the letters of the alphabet was in itself a decoration, and led to ease of pro-



[Cairo Museum.]

FIG. 102.—Ra-hotep and Nefert.
(From Miss Bulley's *Ancient and Mediæval Art*. By permission of Messrs. Methuen.)

duction. Sculptures and bas-relief both display great purity of outline, combined with force, and delicacy of modelling.

The conventions of treatment seem strange to modern eyes; for instance, the face was frequently profile with the body three-quarter, the left shoulder being advanced so that both could be

Sculpture and Painting FIG. 103

seen. Gesture and movement were rarely represented except in battle scenes and in studies of athletes. The composition

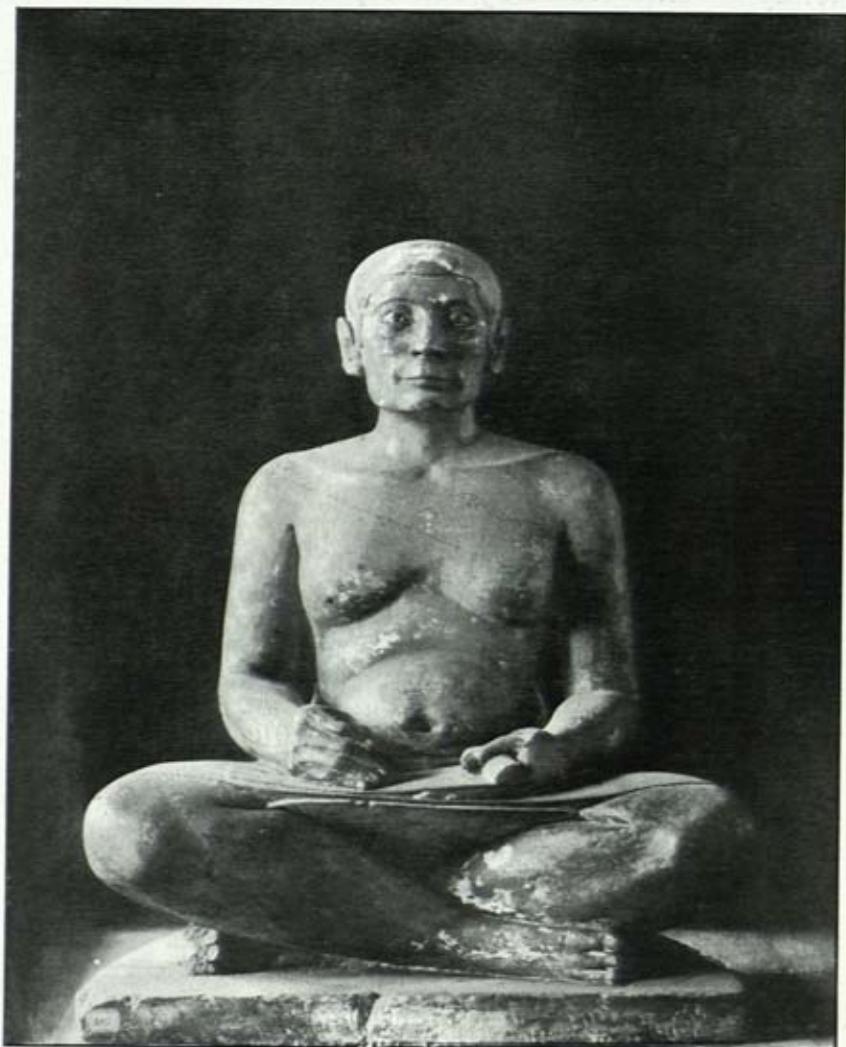


FIG. 103 - Scribe

[*Louvre.*]

and treatment of Rameses II. fighting with the Libyan chiefs could not be better; as Maspero says, "Never has the drama of violent death been analysed with such knowledge or realized with

The Civilization of the Ancient Egyptians

such energy!" With like perfection the play of the muscles of the wrestlers are portrayed, and their attitudes in the struggles for victory are extraordinarily correct, and full of life and vigour.

The same consummate art is displayed in the treatment of animals. The character of each is brought out; the grace of the deer, the play-



[*Royal Scottish Museum.*
FIG. 104.—Head of the Kneeling Scribe.

fulness of the goat, the cat with tense gaze stalking its prey in the marshes, indicate a knowledge and skill that has never been equalled.

In the reign of Akhenaten,¹ reforms were tried in art as well as religion, and with more success, perhaps. Some of the innovations, such as drawing an outside view of the foot, thus displaying the toes, lasted permanently.

¹ 1383-1365 B.C.

Sculpture and Painting



[*Royal Scottish Museum.*]

FIG. 105.—Ka-a-peru, an Overseer, who lived about 4700 B.C., and no doubt saw the Great Pyramid being built. This statue was called the Sheikh-el-Beled by the Arabs who excavated it, from its remarkable resemblance to some village Sheikh.

The Egyptians were adepts at caricature, and many absurd sketches, full of humour, have been found (Fig. 110).

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The decorations in colour in the tombs are beautiful, and they are as brilliant to-day as when painted thousands of years ago. How did these ancient artists manage to paint in underground tombs where no light ever penetrated? Not a trace of smoke or discoloration can be found; nothing known now except electricity, could give the clear light necessary, and yet leave no discolouration. This wonderful work is being ruined to-day by the smoke from torches and other lights, and yet when found, it looked as if the



FIG. 106.—Seti I. in battle. The king leans forward and entangles an enemy with his bow, draws him backwards suddenly, and slays him.

artist had just put the finishing touches before closing the doors. Some have thought the Egyptians must have used electricity, and certainly the results would lead to that conclusion.

A few years ago some portraits in oils were found. Some are excellent in colour and execution, and there is a wide range of type; undoubtedly they are real likenesses, and the character and expression are well brought out. Among them is a dignified, elderly priest, wearing a golden star upon a silver fillet; his face wears a grave and yet pleasant expression. Beside him is a portrait of a frivolous dame, clothed in scarlet and loaded with jewellery; a gold chain adorns her dusky locks, and beryls and

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pearls are on her neck and ears. As a counterfoil to this is the portrait of Demetris, aged eighty-nine, a sweet old lady with white curly hair.

The "rake" of the period is very cleverly painted, the eyes and



[*Royal Scottish Museum.*]

FIG. 107.—A column in the form of a cluster of papyrus stems. It shows Prince Kha-em-uast officiating as Sem priest in the Temple of Ptah in Memphis.



[*Royal Scottish Museum.*]

FIG. 108.—Scribe.

the mouth betraying the character with a subtle suggestiveness. Perhaps the most striking portrait is that of Hermione Grammatike, the earliest woman Professor on record. She apparently lectured on classical literature at Arsinoë. To-day, she gazes out on the modern world with grave and steadfast eyes in a face of delicate features, in a setting of wavy black hair.



[*Royal Scottish Museum.*

FIG. 109.—Portrait of Knumu-hotep; it is from the coffin of carved wood, with gold face and inlaid eyes. (About 3500 B.C.)



[*British Museum.*

FIG. 110.—The Lion and the Unicorn playing a game of draughts.

Sculpture and Painting

All these are executed on panels or on canvas, and were done probably with wax, coloured and laid on with a brush when in a melted condition. They were then mounted on the case contain-



[Royal Scottish Museum.]

FIG. 111.—Portrait of Art-heru.
(About 650 B.C.)



[British Museum.]

FIG. 112.—Portrait head moulded
in plaster and painted, probably
of a man of Greek or Roman
descent—3rd century.

ing the mummy. Sometimes instead of a painting, a cast was taken, gilded, and placed over the face.

A pastel effect was gained in some pictures by a method of distempering on stuccoed canvas; also some paintings have been found in what is apparently water-colour.



[*Royal Scottish Museum.*]

FIG. 113.—The Coffin of Nesi Khonsu Pa Khrat, daughter of the doorkeeper of the Temple of Amen. It is covered with inscriptions from the Book of the Dead. (About 740 B.C.)



[*British Museum.*]

FIG. 114.—Painted Portrait, about 200 A.D., found in the Fayum. The plaster case is gilded and painted with religious scenes. Across it is the inscription—“O Artemidorus, farewell.”

CHAPTER VII

SCIENCE—ENGINEERING SKILL

"All the inhabitants of the town shouted for joy. It was an extraordinarily great sight."

THE scientific attainments of this ancient race were, indeed, remarkable. Two problems engaged their attention; their art presented one, and the needs of their country offered another even more pressing, for solution. So triumphantly did they conquer both, that their manipulation of gigantic masses of stone, and their hydraulic engineering remain unsurpassed to this day.

The prosperity of the country depended then, as now, on the inundation of the Nile, and even in the remotest times the canal system was definitely organized. The arid desert eternally lay in wait to swallow up and merge into itself any land not kept fertile by the river. This constant menace developed the ingenuity of the race to combat the ever-invading sand. A network of canals and dykes covered the whole country in order to regulate and distribute the overflow of the Nile. Embankments followed the course of the river, and canals led the water into the interior; between the principal dykes, subsidiary ones, both parallel and transverse, further divided up the land into a series of basins. June heralded the inundation; in August the sluices were opened, and the fertilizing water poured over the land. It was stopped by a transverse dyke and allowed to lie until the ground was saturated, then the dyke was cut through and the water flooded the next area, the operation being repeated until each basin was full and the country seemed a vast lake intersected in every direction by causeways.

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Construction and repairing of embankments occupied the winter season ; the important ones were built of hewn stone, bricks and earth sufficed for the others. The workmanship in all had to be of the best, to resist the swirling currents of the water. Moreover, during the inundation these causeways, intersecting the country in every direction, became the roads—the only means of intercourse by land between the villages. The laws of mensuration and surveying were practically applied to the elevation of the dykes, which were accurately levelled from the river inland, the land gradually sloping away towards the desert. The difference in level was from 12 to 15 feet, and advantage was taken of the low-lying areas to construct arches and build bridges in the dykes. The lowest level, the fields nearest the desert, were naturally the first flooded ; the high level lands close to the river were even in some places above the inundation, and recourse was then had to hydraulic works to irrigate them efficiently. The water supply was strictly regulated so that all should benefit alike, and guards patrolled the embankments, not only to preserve the dykes and regulate the waters, but to prevent any illicit interference with the sluices. To destroy or injure a dam was a mortal crime, punishable here by the State, and hereafter by the gods. The Judgment scene in the "Book of the Dead" represents the soul as disclaiming such iniquitous conduct : "I have not turned back the water in its season, and I have not cut off a water channel in its course." The government exacted a severe penalty in this world, and the culprit was branded and transported, or was condemned to hard labour in the mines. This was a wise provision ; for if the flood once got beyond control, whole districts might be submerged, villages wiped out, and the loss of life and damage to cattle and property would be overwhelming.

The inundation occurring regularly century after century, gradually raised the entire land level by a deposit of black mud, consequently by degrees the surrounding fields were higher than the towns and villages. This difficulty was also conquered by the Egyptians raising whole villages above the flood level from time to time ; it is recorded that Sabakon undertook and successfully

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accomplished the elevation of the site of Bubastis, a large and important town.

The fields out of reach of the inundation were supplied with water in a very simple manner. A canal was led as far as possible and then a shadûf was erected. This is a kind of draw-well, consisting of a pole and bucket arranged as a lever of the first order. If the field was very high, a chain of shadûfs on platforms led up to it, the bucket of the lowest discharging itself into the next, and so on till the highest was reached on the level of the field. Occasionally, instead of the shadûf a saqqueh was used, a water-wheel on the principle of the windlass and capstan.

Pliny mentions a foot machine. It is difficult to conceive how this last was worked, but it is referred to in Deuteronomy xi. 10: "Egypt . . . where thou sowedst thy seed, and wateredst it with thy foot," etc.

These methods were in general use when the crops were growing and needed constant attention, and they remained the last resort when the inundation failed.

Careful observations were taken as to the condition of the Nile, and its rise and fall were accurately measured by means of Nilo-meters. The one at Elephantiné consists of a staircase ascending from the river between two walls, on one of which is a graduated scale, and the height of the river at various periods is also recorded.



E. Wedgwood.]

FIG. 115.—Modern Shadûf.

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Officials noted the changes and published the reports, and on this information the time was fixed for opening the sluices. The depth of the water, the time it lay on the land, and the superficial area under cultivation, determined the supply and therefore the price of provisions. From the same factors the scribes and surveyors obtained the valuations for the assessment of taxes.

The genius of this people for constructing waterways was truly remarkable, and led them to anticipate the famous Suez Canal by many thousands of years. They cut through the rising ground between the Bitter Lakes and the Red Sea, and then connected the lakes with the already existing canal joining the Wady Tumilat to the Nile. Thus under Rameses II. was achieved a water communication between the Mediterranean and the Red Sea ! In time it became silted up with sand ; again and again the Pharaohs cleared it out, but finally the desert claimed it. It can still be traced running parallel to the modern canal for part of its course.

An immense reservoir in the Fayum, Lake Mœris, 66 square miles in area, was made by, and named after, an ancient unidentified king. The dykes are at least 20 miles in length, and are provided with sluices. The name of Amenemhat III. is mentioned in connection with the dykes, but the classic tradition ascribes the enterprise to a King Mœris.¹

This gigantic undertaking compares well with the modern dam at Aswan, and yet it was planned and executed at least 5000 years ago. The barren, desolate, sandy waste of the Fayum was transformed into a veritable Garden of Eden. The vine, the olive, and the pomegranate flourished on the banks, and the fairy tamarisk, the sweet-smelling mimosa, and a wealth of flowers perfumed the cool air. On the higher ground, the brilliant sunlight was filtered through the thick foliage of extensive woods of sycamore and acacia trees, thus providing an agreeable shade in the heat of the day. It became the favourite resort of the kings of the XIIth Dynasty, who, going primarily for the splendid hunting and fishing, remained there, built many towns and temples, and were finally buried in the vicinity. Wild animals abounded in the

¹ Many Egyptologists identify Mœris with Amenemhat III.

Science—Engineering Skill

mountains and desert, and the marshes were the haunt of the hippopotamus and the crocodile, thus affording excellent sport to the royal hunter and the Court. The lake and the canals teemed with fish, which yielded an enormous sum, and this revenue formed part of the real estate of the Queens of Egypt.

But all these achievements sink into insignificance before the audacity of Menes. Having united Egypt under his sway, he determined to build a new capital, and chose for its site the bed of the Nile, which in those days flowed along west of its present bed. To accomplish the undertaking he turned the river into a new channel flowing much farther east. This feat conclusively proves the mathematical knowledge and engineering skill of the Egyptians, for, great as are many of the engineering feats of modern times, nothing has been achieved that approaches the stupendous works of these ancient kings.

When we come to consider the exploits of this race in another branch of mechanical science, we are amazed at the great skill and knowledge displayed in the quarrying, transportation and erection of colossal statues and obelisks. How it was done remains to this day a mystery.

There can be no doubt that in the construction of the pyramids the inclined plane was used. The limestone for the Great Pyramid was obtained partly from the plateau on which it is built, and partly from quarries 12 miles distant on the other side of the Nile ; remains of the inclined plane can still be traced on both sides of the river, and deep grooves show where heavy weights have been dragged over the road.

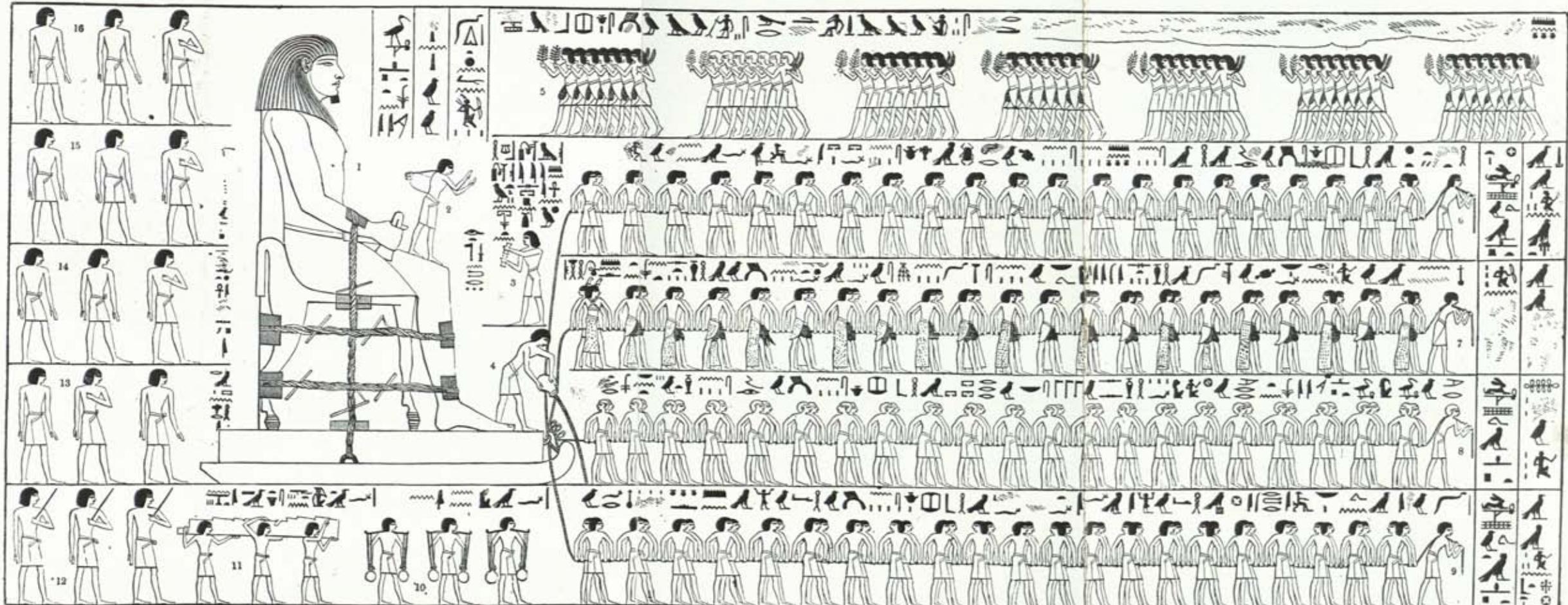
Herodotus tells us that the road from the quarries to the Great Pyramid took ten years to lay, and was made of polished stone on an incline rising 1 foot in 25—an easy gradient, and with grease applied liberally to the runners of the sledge there would be practically no friction over the polished stone. It is probable that human traction was used, because numbers of men can be drilled to march in time and pull together ; the oxen necessary for such heavy weights could never be trained. The stones, too, were valuable, and therefore intelligence was required in their manage-

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ment. This is confirmed by several inscriptions describing the work of transport. Rameses IV. commanded the High Priest of Amen to fetch stone for a monument. The expedition consisted of 5000 soldiers, 800 mercenaries, and 2000 slaves, exclusive of the officers who directed the operations, and "Necht Amen, the superintendent of the artists," who had under him "three chiefs of the stonemasons, two painters, four engravers and 130 stonemasons."

But more convincing even than such statements is an engraved representation of the colossal statue of a prince (Fig. 116). Here we see an alabaster statue secured by ropes on a sledge. Pieces of leather protect the stone from the chafing of the rope. Calculations show that the weight must have been about 140 tons. One hundred and seventy-two men haul on the drag ropes attached to the front of the sledge. To ensure simultaneous action an overseer standing on the knees of the statue claps his hands; this is repeated by a man in front with little hand-drums. Another man standing on the base pours out continuously a stream of oil, and other men walking at the side bear oil pots. A notched beam is carried by others, probably to place, notch down, in hollows of the road to prevent the runners from slipping. Barber has analysed this, and considers that 1980 men would have been required for the haulage of such a mass. In the rear twelve men are seen; perhaps this may indicate that 12×172 men were used, for this total is only eighty-four more than Barber's estimate.

As the pyramid rose, the gradient of the inclined plane would be progressively steeper, and the difficulty of hauling up the stone would be greater; the number of men therefore would have to be increased. No doubt this was done until a couple of hundred feet were completed; but at the top of the pyramid the perpendicular height would be nearly 500 feet, so, to keep the road at a possible angle for traction, it would be necessary to place the beginning of the causeway 6000 feet away—an inclined plane of unimaginable dimensions! The absurdity of this idea is shown by another fact. Vast numbers of men require space to work in, and the characteristic of a pyramid is, that its area decreases with its height; consequently a point is reached when this method becomes useless, there-



Lepsius, *Denkmäler*, ill. 134.

FIG. 116.—Transport from the Quarries of the Statue of Dhut-hotep, Prince of the Nome of the Hare. It is of Oriental alabaster, and is about 20 feet high.

[El-Bersheh.]

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fore some other means must have been employed. In the irrigation department a variety of crane, the shadûf, was used; the wheel and capstan and the single pulley were also known; so these, singly or in combination, may have sufficed to hoist the stones, which were finally placed in position with levers and handspikes. A far more formidable problem is presented by the casing-stones, many of which weighed about 15 tons! Herodotus tells us that the top was finished first, the work being proceeded with from above downwards: "They raised the remaining stones by machines made of short pieces of wood; having lifted them from the ground to the first range of steps, when the stone arrived there, it was put on another machine that stood ready on the first range; and so on, for the machines were equal in number to the ranges of steps." We are left in the dark how this machine of "short pieces of wood" was constructed, and what motive power was used.

Howard Vyse says he found holes on each step, apparently to support this machinery; and that in addition, in front of the northern face of the pyramid in the level rock, he found several rows of circular holes, presumably for the scaffolding or cranes.

The weight of the pyramid stones is far surpassed by many others. Rameses II. used rose granite for a seated statue of himself, it weighs 900 tons; 150 miles separate the quarries and the site



[British Museum.]

FIG. 117.—Colossal Head of a statue, in black granite, of Amenhotep III., XVIIIth Dynasty,
1414-1383 B.C.

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of this colossus ! He erected another at Tanis, so gigantic that the size of the big toe equals that of a man's body ; this weighed at least 1000 tons ! The colossal head of Amenhotep III. (Fig. 117) can be seen in the British Museum, and two huge statues of this proud monarch still keep watch and ward over the plain of Thebes (Fig. 118). They weigh 800 and 1000 tons respectively, the inscription¹ tells us that eight ships conveyed them thither ; "a



L. D., Ab. i. Bl. 91.]

[*Thebes*.

FIG. 118.—Colossi of Amenhotep III. (1414-1383 B.C.), called by the Greeks "Memnon." Tradition says that these statues "sang at dawn."

joyful event was it when they were landed at Thebes and raised up in their places."

According to Herodotus there was a temple at Buto in the Delta made of one single block of stone, 75 feet in height, length and breadth, a perfect cube ; it must have weighed from 5000 to 6000 tons, and it was made of red granite. These granite quarries are at the other end of Egypt, at Aswan—*how* was this shrine transported ?

The erection of obelisks was even more difficult, the great weight of the colossal statues gave equilibrium and stability to the mass,

¹ Rawlinson.

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the slender proportions of the monolith rendered it fragile, and therefore lent an additional danger to the operation. Of those

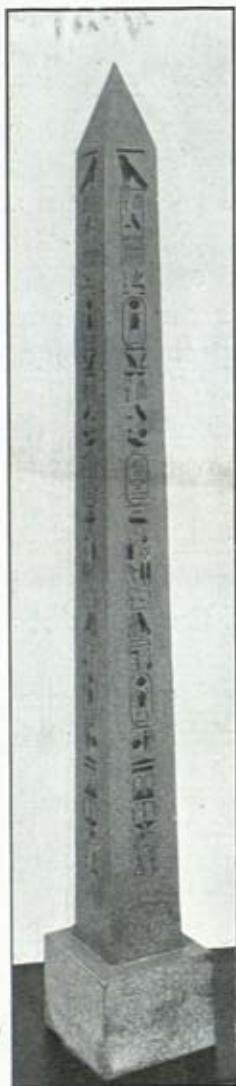


FIG. 119.—Obelisk of Senusret I.
(3549–3515 B.C.), Heliopolis.
Contains all his titles.



FIG. 120.—Obelisk of Hatshepsut
at Karnak (1503–1481 B.C.). It
is 90 feet 6 inches high.

left standing to-day, the highest is at the great temple of Karnak, near Thebes ; it is rather more than 107 feet high, and weighs

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nearly 300 tons ; the quarries are 138 miles distant, but those that were taken to Heliopolis had to traverse 800 miles ! Pliny gives a little story of one, raised by Rameses, on which 20,000 workmen were employed. It was apparently very precious. "Fearing

lest the engineer should not take sufficient care to proportion the power of the machinery to the weight he had to raise, he ordered his own son to be bound to the apex, more effectually to guarantee the safety of the monument" ! It is an interesting quotation, because special mention is made of machinery.

An inscription shows that these obelisks were brought down the river in boats of the barge or lighter type, and informs us that it only took seven months to quarry, transport 135 miles to Karnak, and then to erect these two monuments !

Here is a convincing instance which shows that machinery must have been used when the limited space precluded simpler ways. In the burial-place of the Sacred Bulls, the gigantic sarcophagi are placed in vaults on each side of a tunnel and sunk from 3 to 4 feet below the floor (Fig. 123). The vault is only two or three feet wider than the sarcophagus, so there is no room

[Royal Scottish Museum.]
FIG. 121.—Hatshepsut as Ruler
(1503-1481 B.C.). She built the
great temple of Deir-el-Bahri
and erected obelisks.

for men with levers. Barber points out that the vaults are never opposite to each other, and that this fact, combined with "the entire mechanical surroundings, is almost positive proof that a screw or hydraulic jack was used, because a solid wall was necessary to push against."

Of recent years one of the Viceroys tried to remove one of

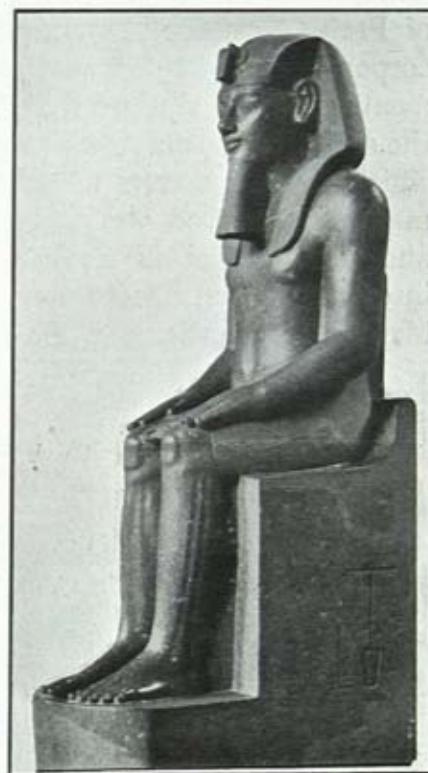


Science—Engineering Skill

these enormous sarcophagi to the Cairo Museum ; but being unable to overcome the mechanical difficulties it was left, blocking up the tunnel ! We perpetually vaunt our superiority in mechanics and science, and yet it cannot be denied that every obelisk that has been brought out of Egypt has been damaged in the transport and in the re-erection.

We may not understand by what means these wonderful monuments were erected, but the master minds that could use the pyramid to demonstrate scientific facts and to express astronomical truths in stone, have shown that they already possessed the ability to reduce their profound learning to the concrete, and to apply it practically. The results conclusively prove that they possessed mechanical knowledge and the technical skill to use it.

The abolition in the third century A.D. of the ancient religion and the establishment of Chris-



[British Museum.]

FIG. 122.—Seated Colossal Statue of Amenhotep III.

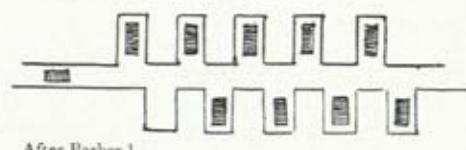


FIG. 123.—Plan of Tunnel and Vaults with the Sarcophagi of the Sacred Bulls at Saqqara.

No doubt the knowledge was at no time public property, but

tianity, rendered these colossal monuments unnecessary ; and with this cessation, the knowledge disappeared, but not before the basic principles had been handed on to the Greeks, who preserved them for the use of Europe when the Dark Ages had passed.

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*as a brother
met him
Baloo*

was preserved jealously by the priests. The High Priest of Ptah was "Chief of the Artificers," and "Superintendent of Sculpture and all artistic work" (Fig. 16); the great artists were all priests of Ptah; thus the knowledge was kept as the secrets of a close corporation, and this would explain the omission from the monuments of all descriptions that would betray their methods. Indeed, the situation is somewhat analogous to our own Mediæval Guilds, which, by the secrets of the tectonic art of the operative Free-masons, produced the marvellous beauties of our cathedrals; and the parallel is further emphasized when we note in the inscriptions that the presence of the "Three Chiefs of the Stone Masons" is mentioned again and again.

CHAPTER VIII

MEDICINE

"Each physician possesses knowledge above all other men."—HOMER.

As in many other branches of science, Egypt must be considered the pioneer in medicine. The principles as there taught and practised are undoubtedly the foundation of our modern science; and indeed it is only since the eighteenth century that we have definitely advanced beyond the point that they had reached three or four thousand years before Christ.

When fully qualified, the doctor selected one subject and became a specialist, devoting his time and energy to acquiring experience in it. The result of this was, that the fame of the Egyptian medical schools spread over the whole civilized world, and Ammianus tells us that "it was enough for a doctor to say he had studied in Egypt to recommend him." Consequently we hear that when illness attacked the royal families of other nations, an ambassador was sent off in haste to Egypt with orders to bring back a skilled specialist. We hear of their fame in Rome, and at the Courts of Darius and Cyrus. The charming tale of the "Possessed Princess of Bekhten" has for its theme the timely rescue of the poor princess by the extraordinary skill of a great Egyptian physician, who apparently was obtained after some delay and difficulty by the distracted father.

Medical practitioners were remunerated from the public treasury; such doctors possibly had "Public Health" appointments, for we find that others received fees for advice and attendance. Their knowledge of anatomy, physiology, medicine, surgery and therapeutics was called "the secrets of the doctor." The profession composed apparently a corporation with secrets,

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analogous to the Mediæval Guilds, and the parallel is the more correct when we remember that in the Middle Ages our Universities were organized similarly to the Guilds, in fact, they were Guilds of Learning.

Their anatomical knowledge is expressed in a phraseology

quaint to our ears. They seem to have had an accurate enough knowledge of the skeleton, and treated fractures successfully. The position and function of the stomach, intestines, spleen and heart were well known; also that the great vessels began at the heart and ran to all parts of the body. "The heart is the centre, its vessels lead to all the members; whether the doctor . . . lays his finger on the forehead, on the back of the neck, on the hands, etc., everywhere he meets with the heart, because its vessels lead to all members,"¹—this proves that the pulse was felt, and indicates a knowledge of the circulation of the blood. The vessels go in pairs to the breasts, the legs and the exterior parts of the body, the head and internal viscera. The "vital airs" enter the body by the nose and mingle



Mansell & Co.]

FIG. 124.—A great Physician, Iu-em-hept ("He who comes in peace"), the son of Ptah.

with the blood (the "vital airs" seems an appropriate description of oxygen); the heart conveys them all over the body, and gives it life and movement. But, alas! the "airs of death" can also gain admittance, whereupon the vessels work badly, become obstructed and inflamed, and give rise to diseases.

¹ The Ebers papyrus.

Medicine

These the physician cures ; or, if he does not, the "vital airs" withdraw from the blood, which coagulates, and the patient dies from want of "vital airs."

Then, as now, the doctor being called in, first looked at the sick person, then, after asking appropriate questions, felt the pulse, and if necessary examined the body, before making the diagnosis and giving the prescription.

Here is an example of a poor man suffering from gastric fever,¹ all the characteristics of the disease are noted down before the diagnosis is made :—"The abdomen is heavy, the pit of the stomach painful, the heart burns and palpitates violently. The clothing oppresses the sick man, and he can barely support it. Nocturnal thirsts. His heart is sick. The flesh loses its sensitiveness as that of a man seized with illness. If he seeks to satisfy a want of nature, he finds no relief. Say to this, 'There is an accumulation of humors in the abdomen which makes the heart sick. I will act.'"

In spite of the mode of expression, this careful analysis of symptoms before venturing on either a diagnosis or method of treatment is essentially modern.

In many ways the methods of treatment were also modern and simple : attend to the laws of health and regulate the diet was frequent advice, on the principle that prevention was better than cure ! The *materia medica* in use was chiefly of vegetable origin, so it was absolutely necessary to study botany and to be familiar with the medicinal properties of the countless herbs that provided the Egyptian doctor with his drugs. Most of the plants mentioned cannot be recognized now, but woodruff, palm, acacia, sycamore, olives and dates and other fruits, were used. These were made up as draughts or inhalations, fomentations, ointments, liniments or poultices, in the way most applicable to the disease under treatment.

Jabs

The method of writing a prescription² was extraordinarily like our own. "Take such and such ingredients, each in a definite quantity, boil, mix together ; make fomentations therewith four

¹ Berlin papyrus, Maspero's translation.

² Ebers papyrus.

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times." On the margins we find entertaining notes jotted down by the careful physician : "Behold, this is a real remedy"; or, "Excellent; I have often made it."

The mineral drugs used were alum, saltpetre, salt, sulphate of copper or "blue stone" and other "stones" that cannot be identified. One of these last had very remarkable properties, the "Memphite stone," which on being applied to a wound produced anaesthesia and so rendered difficult operations possible. They certainly, in some way, had anticipated us in the discovery of anaesthetics, as there are several allusions, the meaning of which cannot be doubted. In addition, Pliny tells us that among the herbs given to Helen of Troy was "Nepenthes, which caused oblivion of sorrow."

Animal substances were rarely used, except honey and milk; but wax, gall, and horn of stags are mentioned; this last reminds us of our own hartshorn. In addition to these vegetable, mineral, and animal ingredients, which are all wholesome and healing, we find another class of recipes, fortunately of rare occurrence, compounded of loathsome materials—excreta of various animals, the brains of a tortoise, lizards' blood, serpents' fat, etc.—we gasp with relief when on reaching the end of the prescription we find it is only to be applied as a poultice! In the seventeenth century of our era (and even to-day in remote country places) excreta of animals mixed with other ingredients, were highly valued as an external application.

Apart from cases of serious illness the doctor had lighter tasks. The women were as curious, then as now, to know whether the child about-to-be-born would be a boy or a girl—or a Court lady asked for some new cosmetic to improve her skin—or an official whose hair was turning grey begged for a tincture that would restore the colour,—all these turned at once to the friendly and capable physician, and found him willing and able to assist them.

CHAPTER IX

SCIENCE—ASTRONOMY

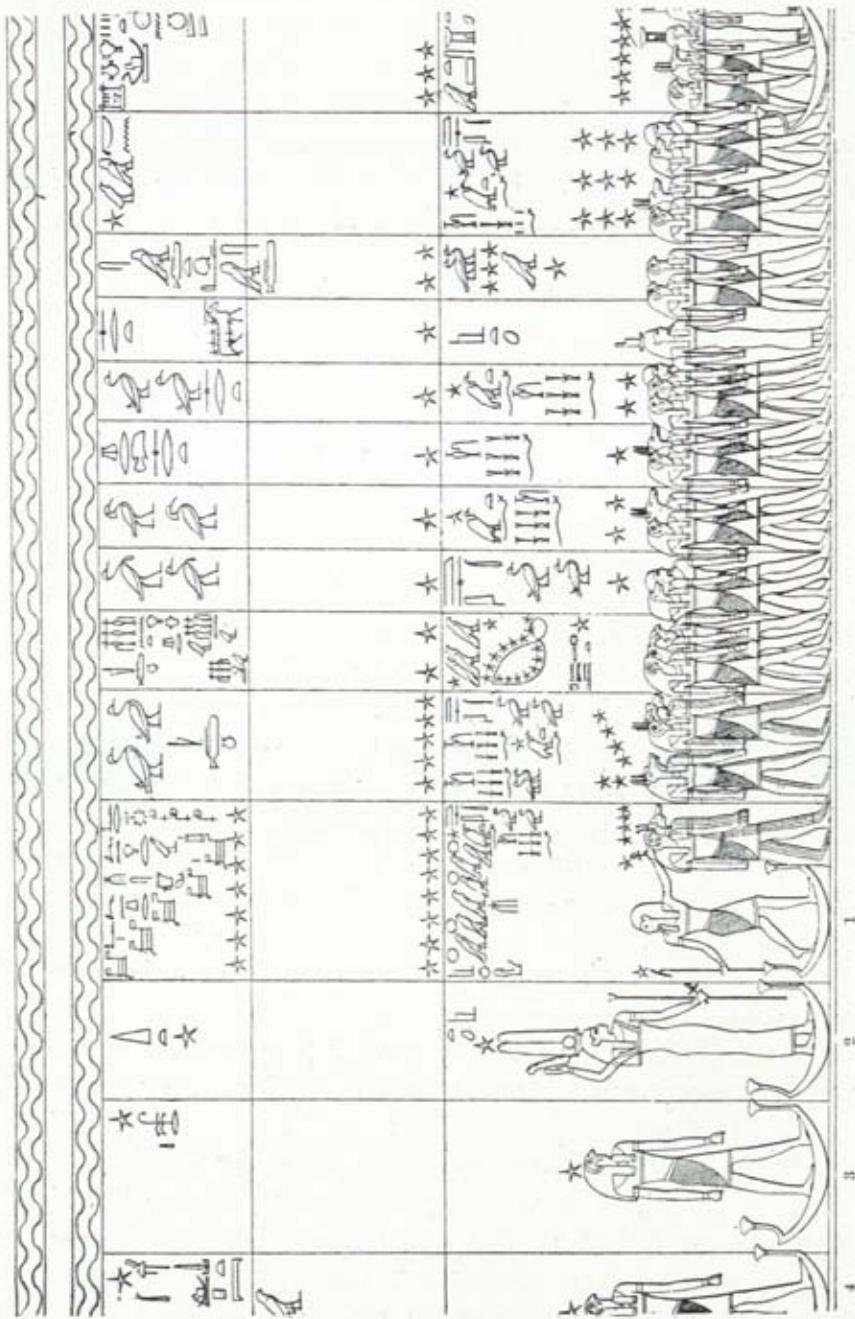
"Master of the secrets of heaven."

IT is with great difficulty that we piece together the knowledge the Egyptians possessed of Astronomy. The books that dealt with this subject are lost ; they treated of the position of the fixed stars, solar and lunar conjunctions, illuminations, phases of the moon, and the risings of sun, moon and stars. All the classic authors agree that their observations and records were of great antiquity, that they preceded and excelled even the Babylonians, and that they possessed observations of total eclipses of the sun and moon going back nearly 20,000 years.

The forms of the constellations, the number of stars in each, can be seen in the astronomical scenes ; but as the names and groupings differ from the modern, identification is very difficult. Their sacred and civil years were calculated from the lunar and solar cycles, and the calendar was corrected by observations of the stars—a sidereal year.

The lunar year consisted of twelve months of thirty days each, and was divided into three seasons, each comprising four of these months, that is, of 120 days. These seasons were of the greatest importance, and from the peculiar nature of the country were well marked and definite : the "Inundation," which occurs about the new moon nearest to the Summer Solstice ; the "Sowing of the Seed," the Winter ; and the "Harvest," which corresponds to our Spring.

The months were more or less subsidiary, and were known only by number, officially, as the 1st or 2nd month of the Inundation, etc. This lunar year, of course, did not coincide with



L. D., Ab. iii, Bl. 227.]

FIG. 125.—Star Chart, from the ceiling in the tomb of Seti I. (1326-1300 B.C.).
1. Orion.
2. Sirius or Sothis.

3 and 4. Planets.

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the solar, so at the end of it the astronomers intercalated five days, called the "five surplus days of the year."

The names of the months are still in use in a slightly altered form, and are popularly preferred to the Arabic ones. This list gives the Coptic and ancient Egyptian forms ; it is interesting, as it shows that at least some remnants of the old language remain.

	Egyptian.	Official Number.	Coptic.
1st Season : THE INUNDATION.	Tahuti . .	1	Toot
	Paopi . .	2	Babeh
	Hathor . .	3	Hatoor
	Khoiak . .	4	Keeak.
2nd Season : SOWING.	Tobi . .	1	Toobeh
	Mechir . .	2	Imsheer
	Phamenoth . .	3	Baramhat
	Pharmuthi . .	4	Baramudeh.
3rd Season : HARVEST.	Pachons . .	1	Beshens
	Paoni . .	2	Baooneh
	Epiphi . .	3	Ebib
	Mesoré . .	4	Mesoree.

This year was the Sacred Year, and the kings had to take a solemn oath "that they would not intercalate any month or day, but that the sacred year should remain as instituted in ancient times."¹

This was necessary, because as it stood it afforded a means of comparison with their sidereal year. But this year was still a quarter of a day too short, so that in four years the movable year was a day behind the fixed year which governed the seasons. That is to say, every fourth year New Year's Day, the first of Tahuti, fell a day too soon ; in process of time this difference increased, and in $4 \times 7 = 28$ years this day fell a week earlier. The months were rotating through the fixed seasons ! The way the Egyptians solved the problem has formed the basis of our own methods of correction, the only difference being that theirs was more precise and scientific than our own. Our months are all of irregular lengths, and we drop in an odd day at the end of February, the shortest month, and call the year Leap Year. They added one

¹ Figulus.

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day at the end of four years, so in that year instead of five sacred days, there were six. The counter-reckoning that afforded the comparison was the Sothic year of $365\frac{1}{4}$ days; it was calculated from the heliacal rising of the star Sirius or Sothis. A definite place of observation being fixed, there is one day in the year when a star will emerge on the horizon just before sunrise; this is called the heliacal rising. The Egyptians naturally chose Sirius, the "second sun," the most brilliant star in the heavens, as it rose just before dawn, remained visible for four minutes, and then disappeared in the glory of the rising sun. Having this Sothic year for comparison, they could view with equanimity the months of the civil year rotating through the seasons; they knew that in due time the two years would again coincide. The time required was 1460 Sothic years, and this was called a Sothic cycle. 1461 civil years = 1460 Sothic years, and once more New Year's Day, the first of Tahuti, was the beginning of the civil or variable year, as well as the fixed sidereal and natural year! This splendid cycle is a witness of the accuracy of the observations and the length of the periods recorded. It is also exceedingly valuable to us, for it enables us to date, calculating backwards, the dynasties and kings, for a Sothic cycle began on 21st July 139 A.D.

They seem also to have understood the Precession of the Equinoxes, the magnificent cycle measured off by the revolution of the axis of the earth round the immovable celestial Pole of the ecliptic. The axis of the earth is tilted, and reels as it describes a circle round this centre. To go completely round it takes 25,867 years! That particular spot towards which at any period the axis is pointing is the Pole; and if there is a star near by, that star becomes the Pole Star. The Pole Star, therefore, in the course of ages alters.

The constellations on the horizon were thirty-six in number. They were governed by genii who superintended the days. They were called Decani, because a group of ten days fell to each. These stars were led round the heavens by Sirius and Orion.

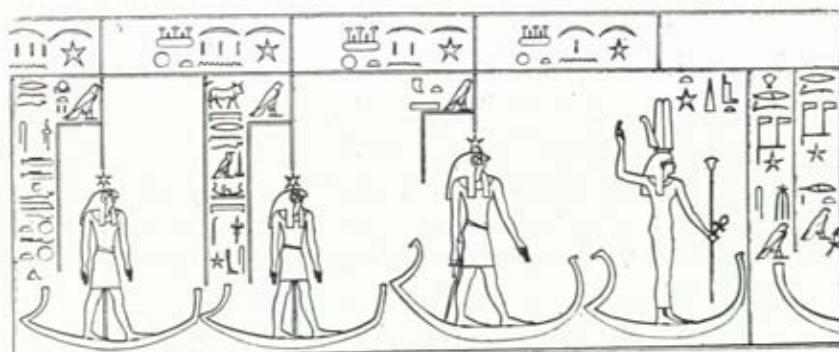
The zodiacal constellations are very difficult to equate with ours; for instance, the Haunch of the Bull (later, called simply the

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Bull) had nothing to do with Taurus, but was the constellation of the Great Bear. The Hippopotamus has been identified with Draco, that winds about the Pole of the ecliptic. And very likely this is right, as in some star charts the Hippopotamus is holding a chain attached to the leg of the Haunch: a pictorial representation of the circumpolar revolution.

They were aware of the earth's motion round the sun. The "circuit of the earth," and again, "who girdeth up the earth in its courses," are two of the expressions¹ used.

Five planets at least are mentioned.



L. D., Ab. iii. Bl. 171.]

FIG. 126.—Sirius, followed by the three Horus planets, probably Saturn and Mars and perhaps Jupiter, standing in their barques. (In the Temple of Rameses II. at Thebes.)

Saturn was the "Star of the West, which traverseth heaven"; it was governed by Horus, nay, more than that, it was the Kā, the spirit, of Horus.

Jupiter was called the "Star of the South." No god was attached to it, as far as is known.

Mars, the "Star of the East"; also called "the Star which journeyeth backward in travelling." This is quite true, as the retrograde motion is very noticeable.

Venus, "the Star of the ship of the Bennu bird of Osiris"; also the "God of the morning," and the evening star. Osiris governed it.

¹ Nesi Khonsu papyrus.

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Mercury was the star of Set.

The Egyptians divided the day and night into twelve hours each. How they measured the time is not known; we know, however, that in processions the priest carried "the time measurer and the palm branch." Regarding the first, it may have been an hour-glass, or a water-clock even, for it is significant that the clepsydra is said to have come from Alexandria in later times. The palm branch was notched, and was used for computing longer intervals.

They understood the equinoxes, and these were governed by Tahuti as master of "equilibrium"; and the waxing and waning Moon were also under his direction. The Moon was known by various names, the "eye of Rā," "the painted eye of the Sun," etc., all implying that its light was borrowed from the Sun.

The solstices were also noted, and temples oriented by the results obtained; other temples were oriented by the equinoxes, or to the Pole Star. These orientations, and the wonderful knowledge displayed in the construction of the pyramid, provide further proof of their astronomical observations.

The Egyptian charts, star maps, and horoscopes were delineated in an exquisitely dainty and poetic manner; the stars and constellations being represented by genii standing in barques and navigating the celestial Nile, which flows through the blue abyss of space.

CHAPTER X

GOVERNMENT AND LAWS

"The Justice Hall of Pharaoh, the excellent Gate, contented about the doing of truth."

EGYPT, the Beloved Land, was a reflection on earth of the heavenly Egypt; the river Nile was likewise the reflection of the celestial Nile; and the Egyptians were a divine people created by Rā. The Gods themselves incarnated and ruled the land for thousands of years; they were followed by a dynasty of Demigods or heroes, and then came the Mānes or ancestors, who were succeeded by the Kings. This direct descent of the Pharaoh from the gods proved his divine origin; he was, as it were, the deputy on earth of God Himself. His name was too sacred for frequent use, hence he was generally called the Pharaoh, which is Per-āa, the Great House, or His Majesty, or merely by the indefinite pronoun One.

On ascending the throne several official titles were bestowed on him.

Two of these names were enclosed in a cartouche, an oval ring denoting the regions governed by Rā, and therefore by his representative; a third name is inside an oblong, called the serekh, the banner or cognizance (Fig. 127).

1. *The Horus name*; this was the name of the king's Kā or double. It was always on the serekh or banner borne behind the king (Fig. 127).

2. *The Vulture and Uræus name*. The Vulture was the emblem of sovereignty of the North, the Uræus of the South; so the king was called Lord of the diadem of the Vulture and the Uræus.

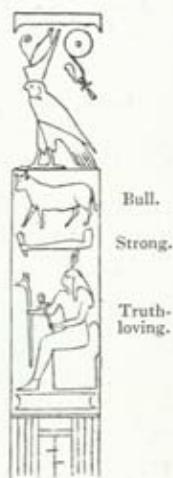


FIG. 127.—Kā
or banner
name.

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3. *The Suten Bat name* (Fig. 128). Suten, the rush, is the emblem of Upper Egypt—Bat, the bee, of Lower Egypt. This was the throne name, and was enclosed in a cartouche.



FIG. 128.—Suten Bat name.

FIG. 129.—Sa Rā name.

4. *The Golden Horus name.*

5. *Son of Rā name* (Fig. 129), which was also his personal name. The Uræus was the emblem of royalty, and was worn by all

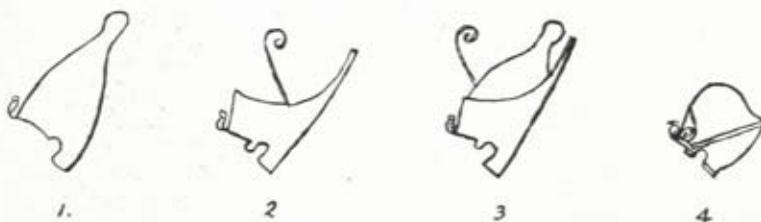


FIG. 130.

1. The White Crown of Upper Egypt.
2. The Red Crown of Lower Egypt.

3. The Double Crown.
4. The Royal Helmet.

rulers. The crown of Upper Egypt was white, that of Lower Egypt red; in historic times they were combined, and form the double crown. Sometimes the king wore the royal helmet (Fig.



FIG. 131.—Child wearing the Horus Lock.



FIG. 132.—Prince, wearing a Wig with the Horus Lock attached as a badge of royalty.

130). Other insignia of royalty were the sceptre and the flail. Princes wore the Horus lock of childhood (Fig. 131), a short plait of hair on one side of the head; when they arrived at

Government and Laws

maturity they still wore a similar appendage to the head-dress (Fig. 132), as a badge marking their rank as royal children.

The king belonged either to the military or to the sacerdotal caste. If to the former, he was at once initiated into the mysteries and taught all that was necessary for him to know, in order that he might perform the necessary sacrificial rites, for he had important religious as well as administrative duties.

The Code of Laws had been given in remote times by Tahuti, and was comprised in eight books which constituted "the wisdom of the Egyptians," which made them famous among other races. These books are unfortunately lost.

At one time there were six Courts of Justice. The judges when presiding at the court wore round the neck, suspended from a golden chain, a golden figure of Maat, the Goddess of Truth (Fig. 133). The Council of Thirty was apparently a permanent assembly of the "great men of the South." This may have constituted a Cabinet. Each of these "great men of the South" was a judge, and sat in one or other of the six courts. The Governor of the South alone had access to all the courts; his title was "Privy Councillor of secret words of the six great courts."

As far as is possible to gather at this distance of time, the administration of justice was well organized. Efforts were made to discover the offender, the case was stated in writing, the defendant also stated his case, the witnesses were called, the



Tel-el-Basta.] [British Museum.

FIG. 133.—Portrait Statue of Utcha-Heru-A wearing the Atef crown, the gold chain, and the image of Maat, the Goddess of Truth. The figure is of Bronze, the mask is gold, and both it and the head-dress are inlaid with lapis lazuli.
(1202-1134 B.C.)

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judges considered the matter, and then laid their opinion before the Supreme Judge, who gave the verdict. No pleading was allowed, as they considered eloquence, by affecting the feelings, was detrimental to justice. No charge was made, and rich and poor were considered equal before the law.

Murder, whether of a free man or of a slave, was punishable by



[Royal Scottish Museum.]

FIG. 134.—This shows the Royal Diadem, a broad band of gold with the uræus on the forehead and the ends terminating in uræi.

death; so also was perjury, which they looked upon with horror as an insult to the gods. For treachery, the punishment was loss of the tongue; for forgery, the right hand was cut off.

Should any man stand by and witness a crime and not do his utmost to prevent it, he became accessory to the crime and liable to severe punishment.

Noblemen and high officials found guilty of treason were in

Government and Laws

honour bound to commit suicide. One document, relating to a court of special inquiry, states: "They found him guilty. They sent him back to his own house. He took his own life."

The method of dealing with robbers seems original and amusing; it was certainly effective! All professional thieves sent in their names to the Arch-thief, and always informed him of the goods stolen, giving all details. If, therefore, a robbery took place, the victim at once lodged a complaint with this chief of the thieves, stating the nature and value of the missing objects, and the time of the theft. The articles could thus be identified, and after paying one quarter the value the owner received them back uninjured.

Egypt was divided into Nomes, governed by nomarchs or hereditary princes. It was an exceedingly important position, and entailed much work on the governor, for the internal administration in all affairs was left entirely in his charge. He assessed the taxes, regulated the land divisions, kept the canals in repair, superintended the produce and guarded against famine, and judged all cases in his district. All citizens were registered; the name, address and occupation were duly reported. The companies of workmen attended in a body, one man bearing the banner; the scribe cross-questioned each individual, and made a note of the answer. A full description of the person was added for identification when deeds were drawn up: "Pamouthes, aged about forty-five, of middle size, dark complexion and handsome figure, bald, round faced and straight nosed"!

A good governor was much loved by his people. This is the



L. D., Ab. iii. Bl. 33.]

[*Karnak*.

FIG. 135.—Charming Head, showing one of the royal head-dresses.

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splendid record of one who "was the staff of support to the aged, the foster-father of the children, the counsellor of the unfortunate." He avers that "none have been unfortunate and none starving in my time"; when "night fell, whoever slept by the roadside blessed me, and was as safe as a man in his own house." Such was the order and discipline in the country that there was no crime, and every one felt safe. The prosperity was so great that each man "paid his dues for love" of this worthy prince.



L. D., Ab ii. Bl. 9.]

FIG. 136.—Overseer and his Dog ; behind is an attendant. IVth Dynasty.

CHAPTER XI

RELIGION

"Great is the Truth, established and mighty, and never hath been broken since the time of Osiris."

"Offer thy prayers with a heart of love."

THE Egyptians as a race were profoundly religious. They recognized divinity in everything around them ; the whole universe breathed of God. Birds, reptiles, animals and trees were permeated with the divine essence ; they saw God as a plurality in unity. The spirit of God was infused into everything, so the powers of Nature, the elements, were also divine, and were personified as the Elementals of earth, sky, air and water. Attributes and functions were also personified, sometimes in human, sometimes in animal form, which became, for the time being, the manifestation of a special attribute of deity, "the abode of the God," the symbol of a power divine. Thus a multiplicity of gods is presented, which is at first confusing. To understand the subject, comparison must be made with the beliefs and religions of other lands, not only of the past but of the present. Many of the inferior gods are seen to be parallel to angels and archangels, to spirits that assist mankind in his progress through this world and through the next, and are by no means to be confused with the great gods. Many of the deities are only aspects, forms, of God.

The ladder of evolution was complete, every rung was occupied. The lower belonged to the animal kingdom and the world of Nature, man occupied a half-way position, above him the angels and messengers of the gods, higher still were greater powers, cosmic gods ; and beyond that, "God One Alone," and behind that even, an Unmanifest and Invisible.

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There was therefore an apparent polytheism, but accompanying it a well-defined and clearly expressed monotheism, and, be it remembered, the oldest statement of monotheism known in the world.

The Supreme existed before all things ; He is self-existent, immortal, inscrutable, infinite and eternal. He is the Creator of heaven and of earth, of gods and of men, and of all that exists. Such is the statement of their lofty conception of the Almighty. But His forms and attributes are many, and some are clothed in shapes mysterious, and to modern eyes strange and incomprehensible. The temple paintings portray them as hawk-headed, or lion-headed, and in many similar forms. The remembrance of the animals that were types and emblems of the four Evangelists, also of the phraseology of Revelation, and the vision of Ezekiel, should give sympathetic insight into a symbolic representation that might otherwise be repellent to Western minds.

Here, in the West, man is considered to have body, soul and spirit. In Egypt the ego was analysed more subtly.

The physical body was called *Khat*; it was mummified after death.

The *Khaibit* has generally been translated " shadow," but it is quite apparent that the word did not bear the ordinary meaning of shadow. The *Khaibit* was attached to the body, but could wander about in the near vicinity of the tomb. It consisted of matter, although not physical matter, and had the appearance of the man, and could derive nourishment from food. It appears to have been a kind of etheric double, or perhaps astral.

The *Kā* was a very important principle. It lived in heaven and protected the man when alive, when dead he " went to his *Kā*." It could materialize after death and wander about, or take up its abode in a statue. It was an exact replica of the person, and possessed the same nature. It is difficult to know how to render the word ; " double " is the usual translation given. It seems to have been the personality, or perhaps what in modern times has been called the astral body, plus the intelligence, for the *Kā* could converse, argue, play draughts, etc.

The *Sahu* was the spiritual body, in which abode the two higher

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principles, the Soul and the shining Spirit. To it also belonged the Name and the Power, all together making up the spiritual man after the death of the body.

The *Ba* is the Soul.

The *Khu* was the highest principle, "the shining Spirit." "O make thou to be glorious my shining spirit (*khu*), O Osiris, make thou to be divine my soul (*ba*)."

In addition to these six principles, man had certain other important attributes or potencies.

Ab, the heart, in many verses this word means "conscience"; in others, again, "will" seems to be the more accurate rendering. The heart also was the definite cause of existence—"my heart whereby I came into being"¹ is a constant expression, and "the heart of my transformations,"¹ alluding to the belief in the transmigration of souls, in re-incarnation, firmly held by the Egyptians.

Sekhem was the "power," a heavenly attribute; and when the shining spirit was endowed with this power, it became "irresistible."

The *Ren* was the "name." The true name of a man expressed his essence, was *himself* in some way. To know the name of a man or of a god, was to obtain power over him; many, therefore, were the precautions taken to preserve this important part of the man.

The Egyptians had no delusions about the resurrection of the physical body. In many verses it is stated, "Thine essence is in heaven, thy body is in the earth," or "my perishable body is in the grave." The custom of mummifying was not because they ever thought to use again that same body, but it appears to have been connected with magical ceremonies; to have formed a nucleus wherefrom the "double" could derive material for manifesting itself on earth, after death.

The other-world was called Tuat. After death *all* went there, the unborn, and also the souls of those who were still upon earth, could go there; in fact, it was a region free alike to the dead, the living, and the about-to-live.

¹ Papyrus of Ani, translated by Budge.

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This other-world had many subdivisions, the souls who inhabited each were apparently graded according to their qualifications, and in each, gods and goddesses performed various duties.

Some bear to Rā the prayers of the living, others again watch over the souls and see that they reach their own forms and are re-united to them. Powers of destruction also dwell there, for the



Papyrus of Ani (Book of the Dead).]

FIG. 137.

1. The dread Assessors sitting in judgment.
2. Ani and Thuthu enter the Hall of Judgment.
3. Anubis tests the balance in which Ani's heart is weighed against the Feather of Truth.
4. Tahuti records the result of the weighing.
5. The Devourer of the Unjustified awaits the result, and departs if all is right.

"criminals in Rā's great hall (the world)"¹ meet with their deserts. The enemies of Rā and the enemies of Osiris (these apparently are not human) are condemned to a terrible fate; there are horrible pits, and a country of blazing fire, and a "valley of those who are cast down headlong."

Spirits "take the measurements of the souls appointed for destruction, and destroy the souls that have to be destroyed";

¹ *Records of the Past*, Lefèbure, vol. x.

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others, again, "fixed the period of the years which those who were decreed for the Tuat should pass there, and the period of those who were to live in heaven." Rā "praises those who have spoken Truth upon earth," and his loyal servants "renew their youth and are given a new birth on earth."

One division, "the Hall of Truth," was the scene of the judgment. The deceased was brought before Osiris and the dread



Papyrus of Ani (Book of the Dead).]

FIG. 138.

1. Horus introducing Ani to Osiris.
2. Ani, justified, bows the knee to Osiris, and lays offerings at his feet.
3. The Shrine of Osiris is made of fire, surmounted with uraei, and rests on a stream of water. Isis and Nephthys stand behind the God.

Assessors, "so that he may be separated from every sin which he hath done." His heart is weighed in the balance against Truth—"O ye who bring words true and false to me, remember it is Tahuti who weigheth them." Tahuti stands by the balance, and having finished the weighing, addresses the Judges: "His soul hath borne witness concerning him, it hath been found true by trial in the Great Balance. No evil hath been found in him." The monster, the Devourer of the Unjustified, who also sat beside the scales, departs. The deceased must, however, himself satisfy the forty-

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two judges, and the statement which he makes to each in turn is called "The Negative Confession." He denies having com-



FIG. 139.—Seti I. presented by Horus to Isis and Osiris. Possibly an initiation ceremony.

mitted various sins ; some are, of course, the obvious ones, lying, murder, etc. ; others are interesting, showing that subtler forms

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of evil were equally considered sin—"I have made no man to weep,"—"I have not inflicted pain,"—"I have not brought forward my name for honours,"—"I have not made haughty my voice"; and there are several more clauses of like nature, showing that the heart must be purged from all sin before man may see God.

The books in which this mysterious other-world is described are very obscure, but give the impression of being a secret ritual. Gateways with stern guardians must be passed, none can enter without giving the correct words. The postulant must know the names of the doorkeepers, and when challenged, be able to give the right answers. Everything depended on the ceremonial being correct in every particular. Like all ancient nations, the religious teaching culminated in the Mysteries. It is possible, therefore, that these writings are portions of a mystic initiation.

There are two accounts of the Creation; they differ slightly from each other, but the main idea is the same in both.



FIG. 140.—A Ritual Scene in which Seti I. (1326-1300 B.C.) receives a collar from the Goddess Hathor. A ceremonial attitude is adopted, of which a step and a grip seem to form part.

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The oldest gods are personifications of properties of primeval matter—there are eight, arranged in pairs, male and female; and it may be as well to mention here that in Egypt the goddesses, the female aspect of deity, were as powerful and as important as the gods, they were in every way equal.

The primitive gods and goddesses, by their names, expressed the ideas of a watery abyss, number without limit, absolute darkness, and inertia. The Cosmogenesis is pictured thus—profound darkness reigned over the watery abyss, in which was all life, latent and inactive. This primeval condition contained within itself potential evolution.¹ This inherent capacity was personified as Khepera,² the God of Becoming, of evolving, creating and producing life. “The Lord of the Universe manifested” Himself in this form out of primeval matter in the watery abyss. He was alone. The potentiality became active by the utterance of the Name as a word of power, and the creative process was initiated by “means of my own will” and on a measured design, regular, just and true. All that came into existence was divine; “I appeared under the form of multitudes of things from the beginning.” First to be developed were heat and moisture; the god Shu being heat, light, atmosphere, dryness, and the goddess Tefnut being coolness, damp, dew, moisture, are twins “poured out” by Khepera as the first stage in the making of the worlds. In this hot, moist, watery mass is formed the luminous egg of the sun, but although existing, it remains hidden for a long time,³ owing to the vaporous condition. Next the Earth-Sky, inseparable and cohering, appeared. Seb was the god of the earth, Nut the goddess of the sky; they were the children of Shu and Tefnut, who had been raised up from the state of inertness in the watery abyss. They remained “close-locked,” as one, until Shu separated them into Seb the solid earth and Nut the starry firmament above, the atmosphere (Shu) remaining always between them. The Sun-god Rā, now having space, took up

¹ The Book of Knowing the Evolutions of Rā.

² One version gives Osiris here as the essence of primeval matter (Budge).

³ “Henti periods,” metaphorically it means, “ages passed.”

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his abode in a brilliant form in the heavens, and ruled over the world.

The pictorial representations show Nut, the goddess, raised up and covered with stars; Seb, the earth, reclines; Shu, the atmosphere, stands in the space between them and supports the starry Nut, while Rā in his boat sails across the heavens from sunrise to sunset. From the rays¹ of the sun, men and women come into existence; then the moon, and following that the plants



[The Book of the Dead.]

FIG. 141.—Ani the scribe and Thu-thu a priestess, his wife, drinking the Water of Life from the celestial Nile under the shadow of palm trees.

and creeping things.² Next follow, from Seb and Nut, the great Gods Osiris, Horus, Set, Isis and Nephthys. It is significant to note that the stars are not mentioned at all. As the account is obviously the creation of the solar system, this is a correct omission.

A few quotations will illustrate the whole idea. The Lord of the Universe says, "I am He who came into being in the form of the God Khepera in primeval times . . . from the primeval matter";³ and, further, "the power Khepera who createth every evolution . . .

¹ Often called "tears."

² In another version the plants, etc., come before mankind.

³ The Papyrus of Nesi-Amsu (Budge).

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[British Museum.]

FIG. 142.—Statuette in silver and gold of Amen-Rā, his head adorned with the disk and plumes. (About 950 B.C.)

who is unknown, and who is more hidden than the other gods ; whose vicar is the divine Disk; the unknown one who hideth himself from that which cometh forth from him ; he is the flame which sendeth forth rays of light with mighty splendour, but though he can be seen in form . . . yet he cannot be understood.”¹

The divine disk is, therefore, seen to be the substitute, the vicar, the manifest form of the mighty Spirit, unknown, unmanifest, but who shows Himself in and by the universe He created. The idea will be further interpreted in the consideration of Amen, Rā, and the combination Amen-Rā. The word Amen means hidden ; not only was the God unseen, but His name even was not known. He is the unmanifest God, whose attributes are unity and eternity, and who is invisible, unknown and unknowable. Few prayers to Him have been found, perhaps because of the intangibility of His qualities. “ Hail ! Amen, let me make supplication unto thee. . . . Come, I pray Thee, place Thou thine heir, and thine image, myself, in the everlasting Under-world. . . . O Amen, O Amen, O God, O God, O Amen, I adore thy name, grant thou to me that I may understand thee ; grant that I may have peace in the under-world ”² The rubric attached to this petition indicates that if the

¹ Papyrus of Hesi-Khonsu, translated by Budge.

² Book of the Dead, translated by Budge.

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ceremonial was properly carried out, he who made this prayer should drink from the source of the Water of Life.

Amen is represented in several ways, oftenest as a man enthroned, holding a sceptre, and the ankh the sign of life, and wearing two unique feathers on his head, the plumes of Amen.

The unmanifest became manifest as Rā : "Praise be to thee, O Rā, exalted Power ; thou art indeed the body of Khepera." Many splendid hymns, invocations and prayers exist, showing the great love the people bore to Rā the One God, the self-existent, the Creator of all that exists and "that does not exist," the giver of life and light, here and hereafter. Not only indeed "God of Life," but "Lord of Love," the overcomer of evil, and the protector of goodness and truth.

"Homage to thee, O thou who art Rā. . . . Thou art the lord of heaven, thou art the lord of earth ; thou art the creator of those who dwell in the heights and of those who dwell in the depths. Thou art the God One, who didst come into being in the beginning of time. . . . O thou divine Youth, thou heir of everlastingness, thou self-begotten one, thou who didst give thyself birth ! O thou mighty [one] of myriad forms and aspects, King of the World . . . lord of eternity and ruler of everlastingness" ;¹ and, further, "I am one of those who worshipped thee upon earth. May I come in unto the land of eternity. May I come even unto the everlasting land, for behold, O my lord, this thou hast ordained for me. . . . I have given my heart unto thee without wavering, O thou who art mightier than the gods." ²

Rā was generally represented as a man with the head of a hawk, wearing the sun disk encircled with a serpent on his head.

When Amen and Rā were combined, the commonest form is as a man wearing the plumes of Amen (Fig. 142) ; sometimes the solar disk appears on the head, which is human or that of a hawk or ram or scarab, all these varieties being a symbolic expression of his powers and attributes. Amen-Rā was worshipped throughout Egypt. His temple at Thebes was the largest and the most magnificent, and the priesthood was the most powerful in the land.

¹ Papyrus of Hu-nefer (Budge).

² Papyrus of Ani (Budge).

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In the invocations to him all the attributes of the unmanifest are mentioned, added to the possession of a form.

"Adorations be to thee, O thou Creator of the gods, who hast stretched out the heavens and made solid the earth. Thou art the untiring watcher, the lord of eternity and maker of everlastingness. . . . Thou hear-

est the prayer of him that is oppressed, thou art kind of heart unto him that calleth upon thee; thou deliverest him that is afraid from him that is violent of heart, and thou judgest between the strong and the weak. . . . Hail, thou Form who art One, thou creator of all things; hail, thou Only One, thou maker of things that exist."¹



FIG. 143.—Grey granite statue of Amen-Rā and Mut, about 1200 B.C.

[British Museum.]

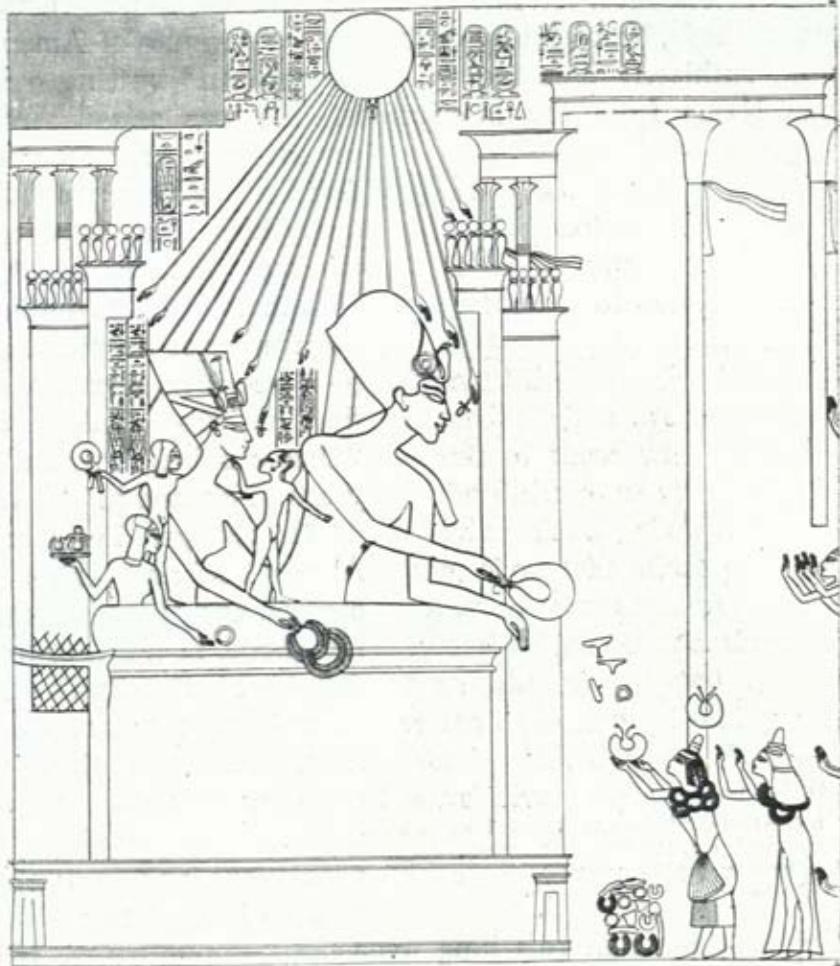
crowns, wings, and heads one male and one female or of vulture and lioness. This duality distinctly implies that all that exists was generated through her alone, because she possessed the power of generation, of reproduction, both male and female. Inscriptions name her as "Lady of Heaven, Queen of

¹ Hymn to Amen-Rā, XXth Dynasty, translated by Budge.

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the Gods, Mut, who giveth birth, but was herself not born of any."

Before leaving this subject a few words must be said on the



L. D., Ab. iii. Bl. 103.]

FIG. 144.—Akhenaten and his Wife and Children, showering gold ornaments on the favourite (1383-1365 B.C.).

religious revolution that was attempted by Amenhotep IV. His mother was a foreigner, and no doubt influenced his religious views. This prince was not prepossessing in appearance, and had a weak constitution and the mind of a fanatic. He was brought

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up in the State religion of Egypt, a worshipper of Amen. He became an apostate, however, and tried to substitute the Aten, the divine disk, for the Supreme God Amen-Rā. Inspired by a peculiar intolerance, for like all converts he was fanatic and rash in his methods, he began by destroying the temples of Amen and of Mut, ruthlessly breaking up the images and cutting out the Divine Name from the inscriptions. He was seized with an

unparalleled fury of destruction, a desire to obliterate everything that appertained to the worship of Amen. This method of beginning his reign was not auspicious, and so it causes no surprise to find that he was alluded to as "that criminal," within fifty years of his death.

He changed his name to Akhenaten,¹ and built a new capital, and there he took up his abode, in the City-of-the-delight - of - the - Sun's - Disk,² surrounded by a more than usually brilliant Court who apparently lived for happiness alone. Pictures of gorgeous processions and innumerable scenes of pleasure quite



L. D., Ab. iii. B. 112.]

FIG. 145.—Hor-em-heb, the great king who reorganized Egypt after the disastrous reign of Akhenaten (1332-1328 B.C.).

contradict the idea that this king lived the "simple life." In this environment, with his wife and seven daughters, he lived a happy domesticated life, and preached the new doctrine, while the government of Egypt went to pieces. The foreign possessions at that time were immense, and some of the Governors, feeling the relaxation of the strong and wise rule of former times, made

¹ Some authorities transliterate this as Khu-en-aten, instead of Akh-en-aten.

² Now Tel-el-Amarna.

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a bid for independence, and rebelled. Syria and Palestine became the scene of insurrection, and the loyal States strove in vain to suppress the revolution. Messenger after messenger was dispatched in haste to Egypt to beg for assistance ; but Akhenaten was too absorbed laying out his new city and encouraging new forms of art, to pay any attention to problems of government. Driving out with his little daughters, or reclining luxuriously on a balcony while the queen lavished gold and jewels on the favourite (Fig. 144), was an occupation more to his taste than coping with distracted ambassadors from the seat of war. The inaction of this extraordinary king cost Egypt all her Syrian provinces ! On his death, confusion and anarchy reigned. Even his own daughters forsook the religion established with such fanaticism ! A few weak kings ruled for a short time. Then came the great Hor-em-heb, energetic and powerful, who with a firm hand restored order, re-established the worship of Amen-Rā as the State religion, and removed the Court to Thebes, the old capital. Akhenaten's city fell into ruins, and his doctrine was forgotten !

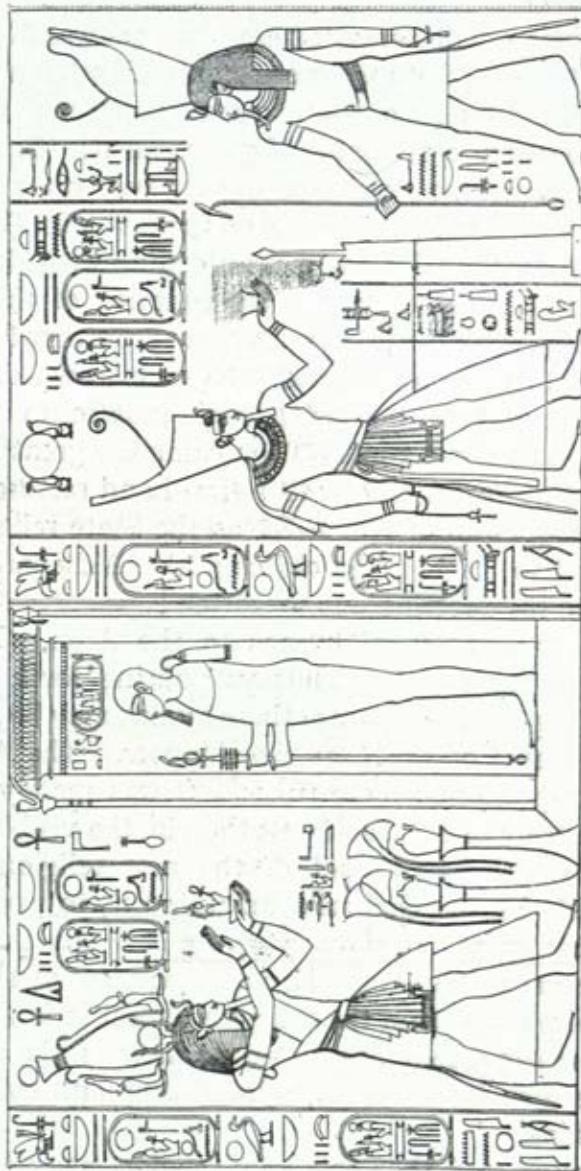
It has left, however, several hymns to the Aten, which was represented as the sun's disk with rays pouring forth from it, each ray terminating in a hand ; from these hymns may be gathered some idea of the belief of the Aten worshippers. The Aten was well known in Egypt from remote times. It was merely the sun disk, the physical body of Rā who dwelt therein, the visible symbol of the invisible God. The object of the new religion was to substitute the disk for the God who inhabited it, to worship the form instead of the spirit !

The chief hymn is fine, from the point of view of showing a great love of nature ; but from the religious aspect it is a doctrine of materialism, stating that the sun-disk *itself* is the source of all life, that the disk is beautiful, self-existent and everlasting, vivifying everything.

It has been suggested that this new religion was an attempt to introduce Monotheism. The monotheistic conception of a Supreme Deity who was a spirit, existed long before this, and the worship of the Aten cannot be considered as Monotheism except

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in the sense that intolerance forbade the mention of any other



L. D., Ab. iii, Bl. 147.]

FIG. 146.—The King, Ramesses II, in full Ceremonial Costume, performing various ritual acts to Ptah in the great Temple at Karnak (1300-1234 B.C.).

god ; there is no emphatic reiteration of unity such as was applied to Amen-Rā, God-One-Alone.

" It is He who giveth souls to millions of forms," thus had they

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been taught formerly. How then could the disk, which was body only, give soul to man?

Taken away, too, was the assurance of the immortality of the soul, the resurrection of the dead, and the life everlasting. That such a god as *this*, should be offered to them, should be substituted for the living Spirit they had adored from remote antiquity, was an innovation foredoomed to failure among a people so devoutly religious as were the Egyptians.

The Divine Mind was personified under the name of Tāhuti or Thoth, called by the Greeks, Hermes Trismegistos. He was also the Word by which the will of God was carried into effect.

Generally he is depicted in human form with the head of an ibis, his symbol.

Such an abstract conception as the creative mind would naturally possess all the divine attributes, consequently his epithets were many, "he who reckons in heaven, the counter of the stars, the enumerator of the earth and of what is therein."

Clemens states that he, as Lord of Books, wrote forty-two books, "written with his own fingers," dealing with ritual and worship of the gods, with law, education, astronomy, astrology, medicine and other subjects. Unfortunately, these are all lost.

He was the "keeper of the balance" in the symbolic sense. Opposing forces of good and evil, light and darkness, were main-



[British Museum.]

FIG. 147.—Khā-em-Uast and his Wife
(about 1300 B.C.).

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tained in equilibrium by his power. This power was his feminine counterpart, the Goddess Maat, or Truth. Maat really means "that which is straight," but symbolically it meant righteousness, moral直ness in every sense of the word.

Complementary to this abstract ideal of the divine mind is another, that of Ptah, the giver or moulder of form. He was the Master Architect and the great Sculptor, and his work was to make manifest all that Tahuti conceived. First he "fashioned his own body," and then he constructed the heavens and the earth.

In the Under-world his presence was necessary as divine modeller, for the spiritual body was needed there, as the physical had been needed on earth.

He is always pictured as a mummy, and stands upon the symbol of Maat, a cubit rod or possibly a chisel, signifying true and just rule.

His temple at Memphis was called "The Abode of the Kā of Ptah," Hat-kā-Ptah. The Greeks corrupted this into Ae-gy-ptos, whence the word Egypt. The High Priest was "the chief leader of artists," and the priesthood consisted of "the chief artists of the land." Among the notable priests must be mentioned Khā-em-Uast (Figs. 147 and 107), the brilliant son and heir-apparent of Rameses II., whose remarkable career was unfortunately cut short by death in his

[British Museum.]
FIG. 148.—Splendid bronze statuette of Osiris. The eyes, beard, and collar are of gold. An elaborate crown, the Atef, surmounts the head.

father's lifetime. Many princes thought it an honour to serve this God, who was Master Architect and Designer, who was the artificer and modeller alike of worlds and of men.

Much as the Egyptians revered the Creator, the Father of all, their hope of immortality was bound up in Osiris, who

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with Isis, the Divine Mother, had the love and devotion of their hearts.

When Osiris was born a mysterious voice was heard proclaiming, "The Lord of all the world has come."

Isis and Osiris ascended the throne of Egypt as Divine Rulers. It is practically impossible to separate their godhead from their humanity. They were each perfect types, Osiris as God, as Divine King, and as man in his human functions of husband and father; Isis as Goddess, as Divine Queen, as woman in her human functions as wife and mother ; they together formed an incarnation of a divine duality. Osiris was perfect man and perfect god, and above all was he Mediator ; for inasmuch as he died and rose again from the dead, it was the eternal hope of each Egyptian that he also would rise again. As God he was, above all, Lord of Immortality. As Goddess, Isis was Mother of God and Giver of Life, not only in this world, but in the next.

After having taught the arts of civilization in his own land, Osiris set forth to travel ; "he conquered Asia and civilized the entire world . . ." winning the hearts of all men by his persuasive tongue and by his music. During his absence, Isis governed Egypt and guarded it from the designs of Set his brother, who hoped to win the crown.

Osiris returned to his kingdom after civilizing the world ; and it was during the great festival, celebrating his return, that Set accomplished by guile what he had failed to effect in war. At a



[Royal Scottish Museum.]

FIG. 149.—Osiris, mummified, wearing the crown and bearing the heq sceptre and the flail.

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royal banquet Set murdered Osiris and subsequently cut the body to pieces.



[Royal Scottish Museum.]

FIG. 150.—Bronze statuette of Osiris, mummified and bearing the heq sceptre and flail, and wearing the Atef crown.

so he became the symbol of the resurrection; he could give life

Here again, at the death as at the birth, it is difficult to disentangle the human from the divine, the treacherous death of the man from the symbolic death of the God.

Set ordered a magnificent chest of the exact dimensions of the body of Osiris, and at the banquet promised to bestow it on him whom it would fit. One after another tried it, and when Osiris lay down the conspirators ran together and fastened on the lid and cast the chest into the Nile and took it down to the sea. Isis searched up and down the land for the coffin. On finding it she revived the inert body of Osiris, so that he reigns as God and King in the Under-world.

This story of the God-man, who suffered, died, and rose again to life eternal, is derived from the Mysteries, a recital of an initiation ceremony of a symbolic death and resurrection. In the Sanctuaries of Osiris, throughout Egypt, his life, death and resurrection were commemorated in the Mysteries that bore his name.

Osiris had conquered death and had risen again in triumph,

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because He Himself was life eternal. "The dead rise up to see Thee . . : their hearts are at peace inasmuch as they behold Thee, O Thou who art Eternity and Everlastingness."¹

Osiris is nearly always depicted as a mummy wearing the white crown ; his emblem is the pillar of stability (Figs. 148, 149, and 150).

Isis is portrayed as a woman, wearing the vulture head-dress, or the double crown, or the symbol of her name, the throne (Fig. 151).

The whole ideal conception of this goddess appealed to the hearts of the Egyptian, and it was a constant prayer that what Isis had done for Osiris and Horus, she would do also for them when the hour of death approached.

After Osiris had been so foully murdered, Isis, "the Shining One," sought him without wearying ; full of mourning she traversed the land, and took no rest until she found him ; and then she uttered the famous lament, immortalized as the "Sorrows of Isis."

Set seized the kingdom, and Isis, hiding in the marshes of the Delta, gave birth to Horus, and brought him up secretly.

Grief and affliction were the portion of Isis during these years. "I speak to you, for I am alone, and am in sorrow which is greater than that of any one," were the words² she uttered on the memorable occasion when Horus lay stretched in death before her, having been stung by a scorpion ; "the beautiful child of gold is stung, and the child, the babe, hath

¹ Papyrus of Ani.

² Metternich Stele.



[Royal Scottish Museum.]

FIG. 151.—Basalt statue of Isis, wearing on her head a pair of horns, between which is the solar disk, and bearing in her right hand the ankh cross, the sign of life.

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become a thing of nothingness"! Then Isis sent forth a cry to Heaven, and the "boat of millions of years stood still," and Tahuti himself appeared,—"I have come from heaven in order to save the child for his mother," and, speaking words of power, Horus was restored to life.



[British Museum.

FIG. 152.—Green basalt statuette of Isis protecting Osiris-Un-Nefer with her wings (300 B.C.).

When Horus grew up and "his arm grew strong" he went against Set, and after much difficulty conquered, and ruled as heir of Osiris.

Set is never represented as human. As Osiris was the incarnation of Good, so Set was the incarnation of Evil; and in this symbolic story is seen the eternal battle between the two, and the final triumph of the Good.

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Horus is always represented as young. Like his parents, he was both human and divine. As a god he was the "divine child," "the light of the world," over whose birth all the gods rejoiced, even the Lord of the Universe Himself. "There is joy everywhere, all hearts are glad, all hearts are glad, every face is



Book of the Dead.]

FIG. 153.—Ani and Thuthu chanting the Litany of Osiris before the Shrine of Isis and Osiris.

happy, and every one adoreth his beauties. His love is doubly sweet unto us, and his active beneficence embraceth all hearts; and the love for him is great in everybody, and they do what is right for the son of Isis . . . holy and beneficent is his name . . . wickedness departeth, evil goeth away, and the earth is at peace."

Such is the description of the mystic Horus.

Considering this divine group of Amen-Rā, Isis and Osiris,

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and Horus, it is not difficult to understand why the Christian religion was at once accepted in Egypt.

Under other names, the Egyptians had worshipped for thousands of years a God who was Father of all; a God-man who died and rose again, bringing immortality to all; and a Divine Child whose mother was also the Mother of God.



[British Museum.]

FIG. 154.—Bronze statuette of Isis nursing the infant Horus.

CHAPTER XII

LITERATURE

"Love Literature as thy mother,
Let her beauties enter into thee."

DAUF-A-KHERTI.

IT would be strange indeed, in a civilization which carried the various arts and sciences to such perfection, if the art of letters should be undeveloped ! The literature was rich and varied, and no department was unrepresented, with the possible exception of the Drama. The ancient writings reveal certain pre-eminent characteristics which distinguish them from the style of other races.

Simplicity of diction is marked. Another salient point is the terseness, the condensation of thought. Occasionally, when used by the unskilful, this conciseness verges on baldness ; but the clever writer manages by one skilful touch to portray a character or describe an emotion. In the choice of an expression, in the peculiar appropriateness of a phrase, the Egyptians are without rival. For instance, a gracious king is described as "caressing of heart to all people," or a judge walks "in the fair paths of straightness of heart." In a few brief words, the amiable and courteous ruler, the conscientious judge stand before us ; it is a real art !

Another virtue of this condensed style is, that it allows of paradox ; it is, in fact, the essence of paradox. Of this many examples might be quoted. "He that obeyeth, is obeyed" ; "The fool . . . liveth in death."

Bound up with this simplicity and terseness is the short sentence. The true short sentence is the natural condensation of a forcible and simple mind. As a race they abhorred prolixity.

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It was their desire "to avoid a multiplication of words." In their literary compositions they were undoubtedly successful, and in their daily life they also abominated the chatterer; as well as being bad form, this vice was against their religion; in the Negative Confession the deceased affirms, "I have not multiplied my words overmuch."

Ornament was used very sparingly, but when introduced it was skilfully applied. The simile was well understood, and those from nature are excellent. The expert use of simile indicates a power of generalization, a capacity for intellectual comparison, and an instinct for emotional appropriateness.

For instance, Rameses II. is compared to

"A victorious lion putting forth its claws,
Growling and roaring loudly
In the Valley of the Gazelle";

or again, to

"A jackal swift of foot.
Seeking what it may find,
Darting round about the land
Like a flash."

In his famous wars it is said—

"He seizeth his enemies
Like a flame seeking the kiki plant,
Like the stormwind blowing up the flame which has tasted the straw,
Destroying till everything becometh ashes."

Florid diction, loaded with figures of speech, was a fault entirely unknown.

In sustained narrative a graphic literalness is noticeable, arising probably from a straightforward nature, a regard for truth, and a horror of exaggeration. It was certainly not due to any lack of imagination, for when we turn from a biography of fact to one of fiction, we find an elegant and restrained imagination and a delicate portrayal of character so clever, that the actors are at once individualized.

In this great land of prototypes nearly every style of modern novel¹ can be paralleled by a story on the same lines.

The novel of life and manners has its prototype in the story

¹ Following the classification of Professor Masson's *British Novelists*.

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of *Sanehat, the Son of the Sycamore*, and his adventures in South-East Syria among the Beduin tribes. The country, the manners, the customs are described, and finally, on his return to Egypt, the contrast between the high civilization of his own land and the nomadic life of the Asiatic is cleverly brought out.

Sanehat fled from Egypt on the death of Amenemhat I. The story does not say why ; but for some reason unknown, as soon as news came to the camp that the king was dead, he escaped by night across the frontier. He "crouched in the bushes" by day, lest he should be seen, and travelled by night. After difficulties and dangers he reached the chain of fortresses that guarded the frontier, and stealthily passed them in the darkness. When he reached the Bitter Lakes his strength was gone. "This is the taste of death," he exclaims as he sinks down exhausted ! But the sound of the lowing of cattle breaks on his ears and gives him courage, he stumbles on a little farther and reaches a desert chief, who gives him "water and boiled milk." The nomads, who stand in awe of this fugitive from the Egyptian Court, pass him on from one tribe to another, till, in the interior, he can rest in safety. He remained a year and a half, and then the Prince of the Upper Land of the Tenu invites him to come and settle in his domain. "He let me choose from among his lands and from among his choicest possessions. He placed me at the head of his children, and married me to his eldest daughter. He made me a Prince of the Tribe." He recounts his warlike expeditions among the other tribes, and there is a fine description of single combat between himself and a hero of the Tenu, who apparently grudged his sudden rise to fame and fortune. This is told in simple and vigorous language. The hero came and challenged him "He was a daring man and had no equal, he had subdued everybody. He said, 'Let him fight with me,' for he thought to slay me." But the hero of the Tenu is as nothing to the Egyptian trained in arms. "I shot at him, my weapon stuck in his neck. He cried out ; he fell on his nose. All the Beduin shouted. Then I took away his possessions, I carried off his cattle ; what he thought to have done to me, that did I unto him ! "

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A good example of the traveller's novel is the tale of the *Shipwrecked Sailor*. As a specimen of imaginative travel it forms an excellent contrast to the many biographies that exist.

A terrible storm arose, and the ship, bound for the royal mines, went down with all on board. The hero seized a plank, and a mighty wave bore him onwards across the ocean for three days and then cast him up on a lonely island. After resting, he set forth in quest of food, and made an offering to the gods. The magic of the sacrificial offering had an immediate and terrifying effect ! "I heard a sound like that of thunder, which I at first took to be the noise of the flood-tide in the open sea ; but the trees quivered, the earth trembled. I uncovered my face, and I perceived it was a serpent which was approaching " ; his size was gigantic and his body was encrusted with gold, and his colour appeared to be that of real lapis lazuli. "He raised himself up and opened his mouth, while I prostrated myself before him. And he said to me, 'Who hath brought thee ? Who hath brought thee, little one ? Who hath brought thee ?'" He then seized the sailor and carried him home, and put him down without hurting him.

The hero then relates the story of the storm and the shipwreck. The serpent is moved to pity, and tells his own story in return. "Fear nothing, fear nothing, little one, let not thy countenance be sad ! If thou hast come to me, it is the God who has spared thy life ; it is he who has brought thee to the island of the Kā, where nothing is lacking, and which is filled with all good things." He then prophesies that in four months a ship will come and rescue the sailor. This island was the home of the snake and all his relations, seventy-five altogether. After four happy months the vessel arrived, and the sailor gratefully thanked the serpent, and promised him many gifts and sacrifices. "I will send to thee vessels filled with all the riches of Egypt, meet for a god, the friend of man in a distant country unknown to men." The serpent smiled amiably at this, and said that it was superfluous to bestow any gifts on him ; besides, "as soon as thou hast quitted this place thou wilt never see this island again, for it will be changed into waves." He then loaded the

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sailor with gifts, frankincense, myrrh, gold and ivory. The grateful man prostrated himself, adoring the serpent, who addressed him :—"A pleasant journey home, little one ; mayest thou behold thy children again, and may thy name be well spoken of in thy town : such are my wishes for thee !"

In this story the characters are sketched with a light hand, but with such truth that they live, the incredulous lord who is accustomed to the exaggerations of a sailor's yarn ; the sailors who "knew everything in both heaven and earth" ; the Lord of the Island himself, with his manner at once regal and benign, his all-seeing wisdom, and his capacity for knowing the thoughts of men. It is with regret we close the book—the lonely Lord of the Island has won our love and sympathy.

The Egyptians excelled in tales of imagination. The best known perhaps are *The Tales of the Magicians*. These are arranged in the familiar Arabian Nights fashion of a series of stories one within the other, various characters taking up the rôle of reciter.

Khufu, the Pharaoh of the Great Pyramid, feeling depressed with affairs of state, calls his sons to amuse him and "make glad his heart." In Khafra's tale the efficacy of the wax model is brought out, in the working of magic. This is the first mention in any literature of this curious custom, which in the Middle Ages was one of the commonest methods of witchcraft. A courtier heard that his wife nightly met her lover by a lake. Being a magician, he made a crocodile of wax and put it into the lake ; it immediately became a real crocodile, and when the lover came to the trysting-place he was at once devoured by the magic crocodile. As in the Jonah legend, the page remains quite comfortably within the crocodile, until some seven days later the nobleman commands the beast to bring forth its victim, and touching the creature, it once more becomes a thing of wax. The king, who was walking with the nobleman, was much astonished, and asks for the whole story. On hearing it he addresses the crocodile, telling him "to take that which is his own." Once more the monster becomes alive, and seizing the wicked page plunges into the depths of the lake !

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In Baufra's tale, Zazamankh the magician works, for the first time in history, the magic, which when narrated of Moses becomes a miracle,—“The waters were a wall unto them, on the right hand and on the left.” Thousands of years earlier Zazamankh had done the same thing; he spoke the Word of Power, and the waters divided and were piled on each side, leaving dry land between, so that the jewel, lost by one of the maidens who was rowing the bark of Seneferu, was seen gleaming on the ground, and so was easily recovered. The magician murmured another spell, and the waters went back into their accustomed place.

Prince Hordedef, who had listened to these entralling tales of former kings, then said, “Why should we go to days that are past for marvels such as these, Dedi the magician can work wonders equal to these.” So Khufu told the prince to bring him to Court. He was a “young man of 110,” and very stout, but Hordedef brought him safely to the palace.

The King said, “Dedi, how is it that I never see thee?”

Whereupon the learned old magician replied, “He who is called comes. The King calls, and, behold! here I am!”

Dedi could restore life to the dead, he could even cause the head to join itself to the neck after decapitation. The king longed to see this feat, and ordered a prisoner to be brought. But Dedi said, “Let it not be a man, O King my Lord; behold we do not even thus to our cattle!”

So they brought a goose, and a duck, and a bull. The goose was decapitated, the body taken to one end of the hall and the head to the other. Dedi commenced his incantations, and behold the body and head, moving at first slowly but with quickening pace, finally rushed together, and the goose stood up and cackled and was just as it had been. This miracle was then performed on the duck and on the bull, for the audience was insatiable, and delighted in these marvels.

EPIC, in its nature, is some of the poetry celebrating the exploits of the kings. The most famous, perhaps, is the poem

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which commemorates the great Battle of Kadesh, the victory of Rameses II. over the Hittites.

In these works the phrases are grouped in antithetical strophes. Alliteration was also much used, and where long poems were habitually recited in public, this style was a distinct aid to the memory, and chimed in with the accompaniment of the clapping of hands or of drums.

The Egyptians excelled in lyrical poetry. Love and death, the two great episodes of life, constitute the principal theme. These poems reveal the divine spark of true inspiration, combined with a felicity of expression which is inimitable. The knowledge of the human heart, and the depth of feeling displayed, coupled with the beauty of idea and phrase, will ensure for the unknown authors of many of these lyrics, the laurel wreath of poetic immortality.

Among these masterpieces is a collection of verses entitled, "The beautiful and gladsome songs of thy sister whom thy heart loves, as she walks in the fields."¹ In true Egyptian fashion, the maiden sings the songs to her "brother whom her heart loves."

At first, love fills her heart with gratitude and joy—

"The breath of thy nostrils alone
Is that which maketh my heart to live.
I found thee:
God grant thee to me
For ever and ever."

Her thoughts are entirely centred in the youth to whom she has given her love, and wrapt in dreams, she finds that her usual employments are neglected.

Her own happiness fills her mind with sympathy with all nature. She has no longer the heart to snare the wild fowl and to rob the birds of the joy of life—

"The wild duck scatter far, and now
Again they light upon the bough
And cry unto their kind;
Anon they gather on the mere—
But yet unharmed I leave them there,
For love hath filled my mind.

¹ Weigall's translation.

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Caught by the worm, the wild duck cries;
But in the love-light of thine eyes
I, trembling, loose the trap, so flies
 The bird into the air.
What will my angry mother say?
With basket-full I come each day,
But now thy love hath led me stray,
 And I have set no snare."

But love idylls end unhappily even in the perfumed gardens of Egypt. Days pass, and the beloved comes not. Eagerly watching at the door, and nervously straining her ears for the sound of the welcome step, she hears steps indeed, but it is only "the swift-footed messenger," laden with many excuses from the absent one. Her answer is brief, she fully understands; there is a pathetic finality in her words—

"Say only, another has found thee!"

In another poem the case is reversed. A youth pours out the treasure of his love, but the maiden disdains him; so he exclaims in despair, and with the humility born of love—

"Ah, if I were only her doorkeeper,
That she might scold me,
Then should I hear her voice
Even though she were angry;
As a boy full of fear
Would I stand before thee."

Trees, flowers and animals take part in the drama of life and converse freely and with understanding.

The Sycamore tree, in a charming poem,¹ invites a young girl to bring her dinner, and to ask her lover to partake of it under the shady boughs—

"Come and linger in the garden,
The servant who belongs to thee
Will bring the dinner things—

Flowers of yesterday and to-day
And all kinds of refreshing fruit.
Come, spend this festival day,
And to-morrow, and the day after to-morrow,
Sitting under my shade."

¹ Erman's translation.

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I am of a silent nature,
I do not tell what I see,
I do not chatter."

The love of nature and flowers appears continually. In another song a maiden, weaving a wreath, begins each couplet with the name of a flower. This leads to a fanciful play on the words which cannot be represented in another language—

"The place is beautiful where we walk,
Because we walk together,
Thy hand resting upon mine,
Our mind thoughtful and our heart joyful.
It is intoxicating to me to hear thy voice;
Yet my life depends upon hearing it.
Whenever I see thee,
It is better to me than food and drink."

The following sorrowful little poem touchingly relates the sad end which befalls the promising young student who plunges headlong into a dissolute course of sensual gratification—

"They tell me that thou forsakest thy books,
And givest thyself up to pleasure.
Thou dost wander from street to street,
Every evening the smell of drink,
The smell of drink repels men from thee,
It destroys thy soul.
Thou art as a broken oar
That can guide to neither side;
Thou art as a shrine without its god."

The end of man was another subject that fascinated the Egyptian poet. The lyrics treating of this are generally songs sung to a harp accompaniment at a feast. The attitude of the Egyptians toward death was very different from modern and Western ideas, but it was quite consistent with the joyous spirit of the race. Life is transient, therefore enjoy it; treasures and possessions must all be relinquished, happiness alone can be kept for ever—happiness and one thing more, a good name—

"Give bread to him who has no field,
And create for thyself a good name for posterity for evermore."

The classic authors state repeatedly that it was a general custom at banquets for the figure of a mummy to be carried round

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with these words of advice : " Gazing on this, drink and make merry ; when thou comest to die, such another wilt thou be."

A very popular poem, known in several versions, bears out this statement, and shows that the contemplation of death did not fill their minds with sadness, but stimulated them to enjoy life while " it was yet to-day." The oldest version is " The song placed in the Temple of the blessed King Antef which is written there before the harper with the harp."

" Follow thy heart's desire so long as thou livest;
Put myrrh on thy head, clothe thyself in fine linen,
Anointing thyself with the true marvels of God.

Let not thy heart concern itself
Until there cometh to thee
That great day of lamentation.
Yet he whose heart is at rest
Can hear not thy complaint.
And he who lies in the tomb
Can understand not thy weeping.
Therefore with smiling face let thy days be happy,
And rest not therein.
For no man carrieth his goods away with him,
Yea, no man returneth again who is gone thither."

A slightly different form was sung by the harper at the funeral of Neferhotep the priest—

" Be happy then, O priest !
Come, scents and perfumes are set before thee,
Mahu-flowers, and lilies for the arms and neck
Of thy beloved, who dwells in thy heart.
Come, songs and music are before thee.
Cast behind thee all care and mind thee of joy,
Until the day cometh whereon thou shalt go down
Unto the land which loveth silence,"

But although the burden of these songs is " eat, drink and be merry ; for to-morrow we die," the inevitable was met with a bright courage—

" When thy messenger comes to carry thee away
Be thou found by him ready ! "

That was the ideal—to " be ready ! " Because, as another

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poem of great beauty tells us, the transition from life to death is entirely natural, and is but the attainment of all that the soul of man desires—

"I say to myself every day :
As is the convalescence of a sick person
Who goes to the Court after his affliction,
Such is death.

I say to myself every day :
As is the inhaling of the scent of a perfume,
As a seat under the protection of an outstretched curtain,
Such is death.

I say to myself every day :
As the inhaling of the odour of a garden of flowers,
As a seat upon the bank of the Land of Intoxication,
Such is death.

I say to myself every day :
As the clearing again of the sky,
As a man who goes out to catch birds with a net,
And finds himself suddenly in an unknown land,
Such is death!"

"All the world's a stage," but for Egypt the drama is closed. For the last time the curtain has been rung down, and the players have passed from the stage of the world—but not from our memories and our hearts.

Nor can we, of modern times, ever estimate the debt that the world owes to Egypt ! The foundations of all science and all art were laid on the banks of the Nile, thousands of years before Christ.

Truly indeed was it written—

"Is there anything whereof it may be said,
See, this is new ?
It hath been already of old time,
Which was before us."



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